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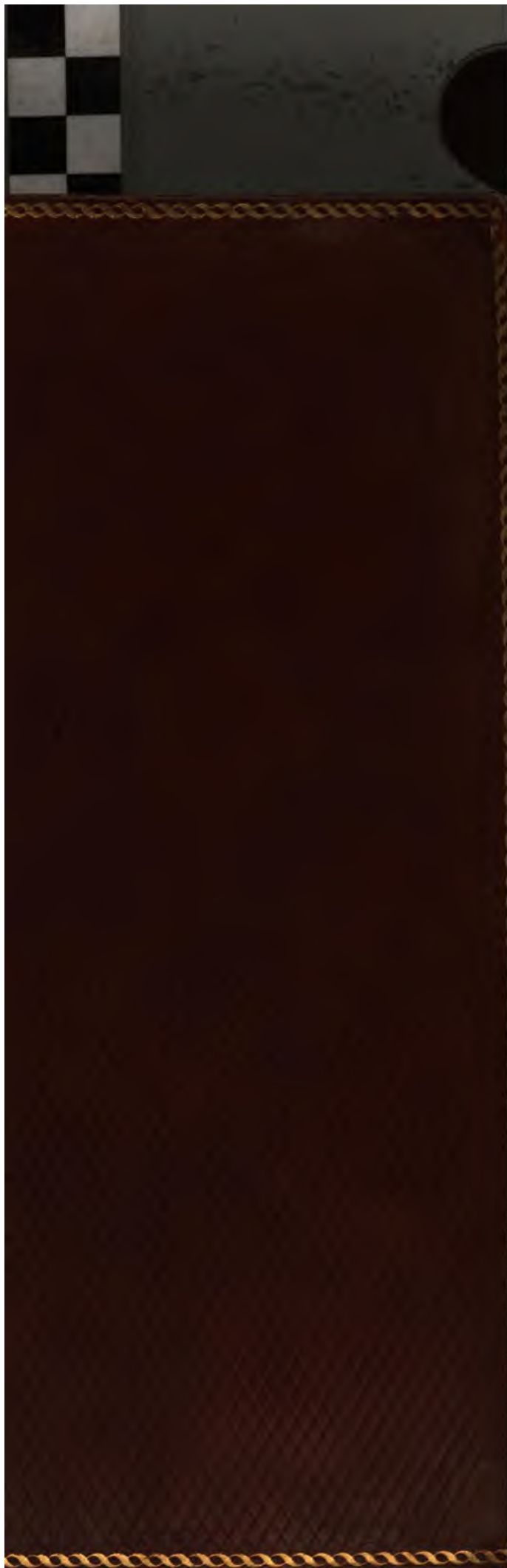
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P11315 d. 46





# ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS,  
AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

*JAMES EDWARD SMITH, M.D. F.R.S.*

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE  
ACADEMIES OF STOCKHOLM, UPSAL, TURIN,  
LISBON, LUND, BERLIN, PHILADELPHIA, AND  
THE NAT. HIST. SOCIETY OF PARIS;  
PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

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“VIRESCERE ACQUIRIT EUNDO.”—*Virg.*

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VOL. IX.

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L O N D O N :

PRINTED BY J. DAVIS, CHANCERY-LANE;

And sold by the Proprietor, J. SOWERBY, at No. 2, Mead Place,  
Lambeth; by Messrs. WHITE, Fleet-street; JOHNSON, St.  
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MDCCXCIX.







VELLA annua.  
*Annual Cress-rocket.*

---

*TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* with a partition twice as long as its valves, projecting in an ovate form beyond them.

SPEC. CHAR. Leaves pinnatifid. Fruit pendulous.

SYN. *Vella annua.* Linn. *Sp. Pl.* 895. *Sm. Fl. Brit.* 675.  
*Huds.* 278. *With.* 564. *Hull.* 143.

*Nasturtium sylvestre*, *Erucæ* affine. *Raii Syn.* 304.

---

THIS is a native of open sandy fields, and was found in Ray's time near Stonehenge on Salisbury plain by Mr. Lawson. We have heard of its being gathered there at a more recent period ; but, having never seen a wild specimen, our figure represents a garden one.

The root is annual. The plant varies much in size according to the luxuriance of the soil, but is not otherwise changed by culture. The stem is more or less branched, leafy, rough with deflexed bristles. Leaves alternate, doubly pinnatifid, roughish, often tinged with purple. Spikes, or rather *corymbi*, of many upright flowers, whose petals are pale yellow veined with purple. Calyx bristly, purplish, its leaves cohering longitudinally. Pouch bent downward as it ripens, globose or elliptical, rough, crowned with its own partition extended in an oval flat form much beyond the valves. Three or four roundish seeds are lodged in each cell.

Only one more species of this singular genus is known, *V. Pseudo-cytisus*, which, as well as the *annua*, is a native of Spain.







## SUBULARIA aquatica.

*Awl-wort.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* entire, elliptical : *valves* elliptical, concave, contrary to the partition. *Style* shorter than the pouch.

SPEC. CHAR . . . . .

SYN. *Subularia aquatica.* *Lim. Sp. Pl.* 896. *Sm. Fl.*

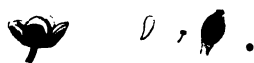
*Brit.* 676. *Huds.* 277. *Wilh.* 564. *Hull.* 143.

*Lightf.* 337. *Dickf. H. Sicc. fasc.* 5. 9.

*S. erecta, junci foliis acutis mollibus.* *Raii Syn.* 307.

**T**HIS little plant, however unostentatious in appearance, is no less remarkable for its situation, and mode of flowering under water, than for the peculiarity of its generic character. Sheppard first found it in the gravelly bottom of an alpine lake in Ireland. Our specimen was gathered in Scotland by Mr. Mackay. It flowers in July, and lasts but one year.

The root consists of many long simple white fibres. Leaves all radical, awl-shaped (whence the name), with a recurved point. Stalk seldom more than 2 inches high, simple, smooth, bearing a simple spike of small white flowers, always immersed in the water, and so closed that the impregnation is accomplished in safety under the protection of the calyx and petals; otherwise the pollen would be spoiled before it could perform its office. By the first appearance of the flower and seed-vessel one would readily take it for a *Draba*, see *t.* 586; but on examination an essential difference is found in the partition being contrary to the valves, not parallel with them, and yet those valves are not keeled as in *Lepidium*, only concave; neither is the pouch notched as in that genus.



*non. Petal. et. fr. et. sem.*







**DRABA verna.**

*Common Whitlow-grass.*

*TETRADYNAMIA Siliculosa.*

**GERM. CHAR.** *Pouch* entire, long-oval: valves flattish, parallel to the partition. *Style* scarcely any.

**SPERM. CHAR.** Stalks naked. Petals cloven. Leaves lanceolate, hairy, slightly cut.

**HYN.** *Draba verna.* *Lin.* *Sp. Pl.* 896. *Huds.* 278.

*With.* 565. *Relb.* 246. *Sibth.* 198. *Curt. Lond. fasc.* 1. t. 49.

*Paronychia vulgaris.* *Rail Syn.* 292.

**T**HE tops of walls, and every dry bank, cottage roof, or barren pasture, are covered with the *Draba verna* in the months of March or April, "a season when any kind of blossom (as Mr. Curtis elegantly observes) is viewed with pleasure." Otherwise this little plant has no striking attractions; nor would its consequence probably be much advanced by any one who should rely on it for the cure of a whitlow. Indeed the old controversy about the true *Paronychia*, or whitlow-grass of the ancients, is scarcely worth reviving.

**Root** annual. All the leaves radical, lanceolate, either entire or irregularly dentate, clothed with simple hairs frequently intermixed with forked ones. Stalks about 2 or 3 inches high, erect, round, simple, slightly hairy, quite destitute of leaves, terminating in a corymbus of many small flowers, soon lengthened out into a somewhat zigzag racemus. Calyx-leaves exceeding. Petals white, cloven about half-way down. Pouch elliptical, flattened, smooth, containing many seeds, and crowned with the persistent sessile stigma.

The whole herb has a pungent creosote-like flavour. The growing is too rank without any.



*1891. 1799. Published by J. C. Gentry - m. m.*

**D R A B A verna.**

*Common Whitlow-grafs.*

**TETRADYNAMIA** *Siliculosa.*

**GEN. CHAR.** *Pouch* entire, long-oval: valves flattish, parallel to the partition. *Style* scarcely any.

**SPEC. CHAR.** Stalks naked. Petals cloven. Leaves lanceolate, hairy, slightly cut.

**SYN.** *Draba verna.* *Lin. Sp. Pl.* 896. *Huds.* 278.

*With.* 565. *Relb.* 246. *Sibth.* 198. *Curt. Lond.*

*fasc.* 1. t. 49.

*Paronychia vulgaris.* *Raii Syn.* 292.

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Root annual. All the leaves radical, lanceolate, either entire or irregularly dentate, clothed with simple hairs frequently intermixed with forked ones. Stalks about 2 or 3 inches high, erect, round, simple, slightly hairy, quite destitute of leaves, terminating in a corymbus of many small flowers, soon lengthened out into a somewhat zigzag racemus. Calyx-leaves spreading. Petals white, cloven about half-way down. Pouch elliptical, flattish, smooth, containing many seeds, and crowned with the permanent sessile stigma.

The whole herb has a pungent creas-like flavour, After ripening its seed it soon withers away,



fig. 1799 *Psithula*. by J. Swartz. Linn.







DRABA aizoides.

*Yellow Alpine Whitlow-grass.*

---

*TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* entire, long-oval: valves flattish, parallel to the partition. *Style* scarcely any.

SPEC. CHAR. Stalk naked. Leaves lanceolate, rigid, keeled, strongly fringed. Petals notched, twice as long as the calyx.

SYN. *Draba aizoides.* *Linn. Mant.* 91. *Willden. Sp. Pl.* v. 3. 424. *Jacq. Fl. Austr.* v. 2. 55. t. 192. *Curt. Mag.* 170.

---

THIS new and very interesting addition to our stock of native plants was discovered by Dr. Wm. Turton, in March 1803, growing wild abundantly on walls and rocks about Pennard Castle, 8 miles west of Swansea in South Wales. The Doctor informs us that the castle is surrounded with sands, almost inaccessible, and cannot have been inhabited for some centuries, and that many of the aged plants grow far out of all possible reach.

The roots are perennial, branched, bearing many round tufts of crowded, linear-lanceolate, rigid, shining leaves, with a strong rib, and more or less keeled; their margin strongly fringed with white bristly hairs. Stalks solitary, terminal, simple, naked, stiff, round and smooth, about an inch and half high. Flowers numerous, corymbose, of a bright golden yellow. Calyx-leaves broad, elliptical, concave. Petals twice as long as the calyx, obovate, obtuse, with a slight notch. Stamina not projecting. Antheræ yellow. Pouch elliptical, flat, acute, crowned with a longer style than is usual in this genus. Seeds several in each cell.

As this *Draba* blossoms so early as March, continuing till the end of April, and is of so brilliant and singular an appearance, nothing can be more desirable for decorating rock-work and dry barren situations. It is accordingly not unfrequent in gardens, where it forms large tufts without any care, and bears our severest winters.

---



Fig. 1. 1894. *Asplenium* sp. nov. (1894. 1894.)





[ 1838 ]

DRABA hirta.

*Simple-haired Whitlow-grass.*

---

TETRADYNAMIA *Siliculosa.*

GEN. CHAR. *Pouch* entire, long-oval: valves flattish, parallel to the partition. *Style* scarcely any.

SPEC. CHAR. Stalk nearly naked. Petals undivided. *Pouch* lanceolate. Leaves slightly toothed, fringed with simple hairs.

SYN. *Draba hirta.* Linn. *Sp. Pl.* 897. Sm. *Fl. Brit.* 677.

*D. stellata.* Dicks. *Tr. of Linn. Soc.* v. 2. 288.

*Crypt. fasc.* 2. 29. *With.* 565. *Hull.* 143.

*D. pyrenaica.* *Fl. Dan. t.* 143.

---

GATHERED on the Highland mountain of Ben Lawers by Mr. Dickson; and since by the late Mr. J. Mackay, from whom we received this specimen. Few plants are less generally known.

It is perennial, and flowers in May and June. Roots branching at the top, and bearing several little tufts of lanceolate, spreading leaves, more or less waved or notched, fringed, sometimes hairy beneath. All the hairs are quite simple, except those on the fruit, and point rather upwards. Stalk 2 or 3 inches high, solitary, simple, round, more or less hairy, naked, except an occasional leaf near the bottom. Flowers small, in a little corymbus. Calyx spreading, hairy. Petals white, scarcely notched. *Pouch* upright, lanceolate, flattish, a little longer than its partial stalk, crowned with an almost sessile stigma, and generally clothed with minute, forked, divaricated, white hairs.

The real *D. stellata* of Jacquin has starry hairs on the leaves, shorter pouches, a longer style, and flowers thrice as large.

We take this opportunity of mentioning that the discovery of *D. aizoides*, t. 1271, is claimed by our obliging correspondent John Lucas, Esq. of Stout Hall near Swansea, who informs us he found it in 1795 near Wormshead, 16 miles west of that town; but having never mentioned it to his friend Dr. Turton, the latter justly thought himself the original discoverer.

L. 258



*July 2, 1800. Published by T. Sowerby, London.*







D R A B A incana.

*Twisted-podded Whitlow-grass.*

TETRADYNAMIA *Siliculosa.*

GEN. CHAR. *Pouch* entire, long oval: valves flattish, parallel to the partition. *Style* none.

SPEC. CHAR. Stem-leaves numerous, hoary. Pouches oblong, obliquely twisted.

SYN. *Draba incana.* *Limn. Sp. Pl.* 897. *Huds. Fl. An.* 279. *With. Bot. Arr.* 669. *ed.* 3. 566. *Fl. Dan. t.* 130. *Lightf. Scot.* 338.

*Lunaria contorta major.* *Rati Syn.* 291.

A VERY rare inhabitant of alpine calcareous situations, in Wales, Westmoreland, and Scotland. The root is biennial, flowering early in the second summer. The specimen here represented was sent from Scotland young, by Mr. Mackay near Edinburgh, and being planted in a garden, flowered more luxuriantly than is usual on rocks or walls; but the plant often grows as large in rich moist spots even on its native mountains. The specimen in *Flora Danica* is a starved one.

Root long, branched. Stem erect, hairy. Leaves ribbed, hoary: the radical ones lanceolate, forming a thick rose-like tuft: those on the stem sessile, alternate, ovate or wedge-shaped, variously dentate and notched. Flowers small, white, in a terminal corymbus, which is soon lengthened out into a racemus. Petals inversely heart-shaped. Stigma notched. Pods oblong, smooth, tipped with the permanent stigma, and singularly twisted half round. Seeds several.

The stem in poor specimens is simple, in more luxuriant ones branched in an alternate manner.



*Barbarea vulgaris* L. var. *officinalis* L.





D R A B A muralis.

*Speedwell-leaved Whitlow-grass.*

---

TETRADYNAMIA *Siliculosa.*

GEN. CHAR. *Pouch* entire, long-oval : valves flattish, parallel to the partition. *Style* scarcely any.

SPEC. CHAR. Stem branched. Leaves heart-shaped, toothed, hairy. Pouch elliptical, obtuse, flat.

SYN. *Draba muralis.* *Linn. Sp. Pl.* 897. *Sm. Fl. Brit.* 679. *Huds.* 278. *With.* 566. *Hull.* 143. *Bursa pastoris major*, *loculo oblongo.* *Raii Syn.* 292.

---

GATHERED by the Rev. Mr. Abbot, in flower April 14 last, on the Wardon Hills, near Barton in the clay, Bedfordshire, and the second rare north-country plant which has rewarded that gentleman's perseverance and acuteness this spring in his own neighbourhood, see *t.* 902. This *Draba* has scarcely before been found truly wild out of Yorkshire, though naturalized on walls about Chelsea garden. It loves a dry calcareous soil, and rather shady situation.

The root is annual, small, fibrous, or somewhat spindle-shaped. Stem a span high, branched from the bottom, leafy, round, clothed with depressed forked and stellate hairs. Leaves alternate, heart-shaped; the uppermost clasping the stem; the lowest on short footstalks; all toothed, rough with simple and forked hairs intermixed. Flowers in a terminal *corymbus*, lengthened out as the fruit is fully formed into a very long *racemus*, small, white, numerous. Petals undivided, obovate. Pouch flat, not twisted, elliptical, bluntish, smooth, standing on the spreading horizontal hairy flowerstalk, about twice its own length. Style very short, crowning the pouch.



*Caps. var. pubescens* by J. Gussone







## ALYSSUM sativum.

*Gold of Pleasure.**TETRADYNAMIA Siliculosa.*

**GEN. CHAR.** *Pouch* nearly entire, bordered, tipped with the style: valves concave, parallel to the partition. Two of the *filaments* (in some species) marked with a small tooth.

**SPEC. CHAR.** Stem herbaceous. Leaves lanceolate, arrow-shaped. *Pouch* obovate, inflated.

**SYN.** *Alyssum sativum.* *Sm. Fl. Brit.* 679.

*Myagrum.* *Raii Syn.* 302.

*M. sativum.* *Linn. Sp. Pl.* 894. *Huds.* 277. *Hull.* 142.

*Moenchia sativa.* *Gmel. Syst. v. 2.* 971. *With.* 562. *Hull.* 142.

**THIS** plant, remarkable for the ill-founded pomposity of its English name, and for the difficulty of settling its genus in a botanical system, occurs accidentally in cultivated fields, chiefly among flax, its seeds being imported from abroad; for it neither seems an original native, nor does it ever establish or propagate itself long amongst us. Much trouble would have been spared to the writers of British Floras, at least to those who investigate principles, if it had never come hither at all. Every one can indeed decide that it is no *Myagrum*; but unless the genus of *Alyssum* were totally reformed, we do not see how this plant can be separated from it.

Our specimen was gathered in July last, in Lakenheath field by Wangford, Suffolk, by Mr. T. K. Eagle. The root is small, annual. Stem erect, round, leafy, smooth or a little downy, paniced. Leaves alternate, lanceolate, nearly entire, roughish to the touch, clasping the stem with their arrow-shaped base. Flowers small, pale yellow, on long simple stalks forming a corymbus which soon becomes a spike. Calyx bristly, a little spreading. Petals obovate, entire. Stamina all without teeth. *Pouch* obovate, inflated, erect, entire, surrounded by a compressed border, crowned with the style. Seeds many in each cell, roundish, pendulous on little stalks from the edge of the partition.



*Doct. L. edis. Published by J. G. Sowerby, London.*





ALYSSUM maritimum.

*Sweet Alyssum.*

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* nearly entire, bordered, tipped with the style: valves concave, parallel to the partition. Two of the filaments (in some species) marked with a small tooth.

SPEC. CHAR. Stem somewhat woody, much branched, spreading. Leaves lanceolate, acute, entire, hoary with close-pressed hairs. Stamens simple. Pouch compressed.

SYN. *Alyssum maritimum*. Willd. *Sp. Pl.* v. 3. 459.

*A. minimum*. Linn. *Sp. Pl.* 908. *Herb. Linn.*

*A. halimifolium*. Ait. *H. Kew.* v. 2. 381. *Curt. Mag.* t. 101.

*Clypeola maritima*. Linn. *Sp. Pl.* 910.

PROFESSOR William Duncan of Aberdeen, in the autumn of 1804, sent me specimens of this plant gathered half a mile from the sea in that neighbourhood, but I hesitated to admit as a native what is so frequently cultivated (for its honey-like scent) in gardens. I now hesitate no longer, for my friend Mr. W. J. Hooker has found this *Alyssum* on the maritime cliffs of Devonshire at Budleigh-Salterton, and our specimen was sent from thence by the Rev. Mr. Jervis at his request. On the southern shores of Europe no plant is more common, in dry stony places, flowering in autumn, and even in winter. The above synonyms show how little it has been understood. It is certainly no *Clypeola*, but an *Alyssum*; yet having been never known by the Linnæan name of *minimum*, and that name being exceptionable, we prefer the above. It is not the real *halimifolium*, though it may be Hermann's *t.* 595.

The root is perennial, yet not very durable. Stems numerous, woody, spreading. Leaves alternate, lanceolate, more or less clothed with close-pressed silvery hairs. Flowers numerous, white, fragrant. Their stamens, and claws of the petals, turn purple in decay. Pouches in long clusters, 2-celled, 2-seeded, a little convex.

1724



*Apr 1 1867. Published by J. & J. Storer & Co. London.*







## LEPIDIUM petræum.

*Mountain Pepper-wort.*TETRADYNAMIA *Siliculosa.*

GEN. CHAR. *Pouch* notched, with many seeds: valves keeled, but not margined: partition contrary to the valves.

SPEC. CHAR. Leaves pinnated, entire. Petals not longer than the calyx, slightly notched.

SYN. *Lepidium petræum.* *Linn. Sp. Pl.* 899. *Huds. Fl. An.* 280. *Willd. Bot. Arr.* 670.

*Nasturtium montanum annuum tenuissime divisum.*

*Raii Syn.* 304.

WE are obliged for this rare little plant to John Adams, Esq. who gathered the specimen early in March 1793 on a limestone wall in a very warm situation about two miles from Pembroke. It is also still found, as in Ray's time, on St. Vincent's rocks near Bristol Hot-wells, as we are informed by Dr. John Ford.

Root biennial, taper and fibrous. Stem much and alternately branched, spreading. Leaves elegantly pinnated, or rather very deeply pinnatifid, with an odd lobe; their segments oval, or spatulate, more or less pointed, entire, smooth. Flowers in a corymbus, gradually lengthened out into a spike, very minute, erect. Calyx and corolla spreading, the leaves of the former ovate and concave; the petals somewhat obovate, but narrow, white, about the length of the calyx, or shorter, sometimes, but not always, slightly notched at the tip. Stamens six, of which, from the smallness of the flower, the inequality can scarcely be perceived, but the shortest stand remote from the others. Pouch exactly oval, flat, with the remains of the style in a minute notch at the tip, smooth: valves boat-like, with a sharp, but not dilated, keel. Seeds two in each cell, on slender footstalks.

This species has the proper pouch of a *Lepidium*. In some foreign ones that part so nearly approaches to the pouch of *Thlaspi* in figure, it is scarcely possible to define the limits of the two genera.







LEPIDIUM latifolium.

*Broad-leaved Pepper-wort.*

TETRADYNAMIA *Siliculosa.*

GEN. CHAR. *Pouch* notched, with many seeds : valves keeled, but not margined : partition contrary to the valves.

SPEC. CHAR. Leaves ovato-lanceolate, undivided, serrated.

SYN. *Lepidium latifolium.* *Limn. Sp. Pl.* 899. *Huds. Fl. An.* 279. *With. Bot. Arr.* 671. *Raii Syn.* 304.

GATHERED wild at Heybridge, near Maldon in Essex, by Mr. Edward Forster, jun. in the place mentioned by Ray. It has been found in other parts of Essex, always in wet shady situations; and the late Mr. Humphrey discovered it below Sheringham cliffs in Norfolk. Otherwise it is by no means common.

Root perennial, long, branching, and spreading very far. Stems erect, alternately branched, leafy, round, smooth, panicled at the top with numerous branches of small whitish flowers in little corymbi, appearing in July. The leaves are alternate, acute, of a broad lanceolate figure, lengthened out at the base and the tip, serrated in the middle, glaucous, especially beneath. Their taste is biting and disagreeable. An infusion is said by Dr. Withering to be emetic.









[ 1595 ]

**LEPIDIUM ruderaie.**  
*Narrow-leaved Pepper-wort.*

---

*TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* notched, elliptical, with many seeds: valves keeled, contrary to the partition.

SPEC. CHAR. Flowers with two stamens, without petals. Lower leaves pinnatifid, toothed; upper linear, entire.

SYN. *Lepidium ruderaie.* *Linn. Sp. Pl.* 900. *Sm. Fl. Brit.* 682. *Huds.* 279. *With.* 568. *Hull.* 145. *Relh.* 252.

*Nasturtium sylvestre, osyridis folio.* *Raii Syn.* 303.

*Thlaspi minus.* *Ger. em.* 262.

---

SENT from Yarmouth by D. Turner, Esq. in July last. It grows in maritime places about rubbish, preferring a muddy or calcareous soil to sand, flowering from June to August.

Root annual. Herb various in luxuriance, foetid and pungent to the taste and smell when bruised. Stem branched, round, hoary, leafy. Leaves alternate, fleshy, smooth; the lower ones pinnatifid, their lobes linear, more or less toothed; the upper undivided, linear and entire, somewhat revolute. Flowers minute, numerous, with a white-edged calyx, but no petals, and only 2 stamens. Dr. Withering mentions the petals as only "sometimes wanting," and that the stamens are either 2 or 4. Copious seed-vessels are produced in long spikes, and are roundish, compressed, with a little notch at the top containing the short style.







## THLASPI arvense.

*Smooth Mithridate Mustard, or Penny-cress.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* notched, inversely heart-shaped, with several seeds: valves boat-like, their keels forming the border: partition contrary to the valves.

SPEC. CHAR. *Pouch* orbicular, compressed, smooth. Leaves smooth, oblong, toothed.

SYN. *Thlaspi arvense*. *Linn. Sp. Pl.* 901. *Sm. Fl. Brit.* 683. *Huds.* 281. *With.* 568. *Hull.* 145. *Relh.* 252. *Sibth.* 199. *Curt. Lond. fasc.* 6. t. 43.

T. *Dioscoridis*. *Raii Syn.* 305.

RECENT specimens of this *Thlaspi* were sent us from Norfolk, in August last, by the Rev. G. R. Leathes. It occurs now and then in cultivated fields, but is not frequent; and, like all annual plants so situated, frequently changes its residence,

1659



*Ver. 2006. Published by J. S. Sowerby, London.*







THLASPI campestre.

*Common Mithridate Mustard.*

---

TETRADYNAMIA *Siliculosa.*

GEN. CHAR. *Pouch* notched, inversely heart-shaped, with several seeds: valves boat-like, their keels forming the border: partition contrary to the valves.

SPEC. CHAR. *Pouch* roundish, sprinkled with glandular dots, bordered at the upper part. Leaves arrow-shaped, toothed, hoary.

SYN. *Thlaspi campestre.* Linn. *Sp. Pl.* 902. *Sm. Fl. Brit.* 684. *Huds.* 281. *With.* 569. *Hull.* 145. *Sibth.* 199. *Curt. Lond. fasc. 5. t. 45.*

*T. vulgatius.* *Raii Syn.* 305.

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THIS is not an uncommon plant in cultivated ground, though not mentioned in the Cambridge or Bedford Floras. It flowers in July and August.

The root is annual, and tapering. Whole herb clothed more or less with short hoary pubescence. Stem about a foot high, branched above, round and leafy. Lower leaves obovate; upper arrow-shaped, acute, clasping the stem; all generally toothed, sometimes entire. Flowers small, white, in small *corymbi* soon lengthened out into very long spikes. Petals spatulate, undivided, scarcely longer than the calyx. *Pouch* roundish, protuberant, its border much dilated at the upper edge, and notched where the style is inserted. Seed 1 in each cell. The sides of the pouch are clothed with small glandular depressions, like little shining scales, by which this species appears to us clearly distinguished from the true *T. hirtum*, a plant we have received from Scotland since the second vol. of *Fl. Brit.* was published. These scales are much more certain than the want of hairs; for the pouch of *T. arvense* is sometimes hairy, and then it becomes the *hirtum* of Hudson, as we know by a specimen of his own. There is a variety with smooth leaves.







[ 1803 ]

THLASPI hirtum.

*Hairy Mithridate Mustard.*

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TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* notched, inversely heart-shaped, with several seeds: valves boat-like, their keels forming the border: partition contrary to the valves.

SPEC. CHAR. *Pouch* elliptic-oblong, often hairy, bordered at the upper part. Stem-leaves arrow-shaped, hoary. Style elongated.

SYN. *Thlaspi hirtum*. Linn. *Sp. Pl.* 901. *Sm. Fl. Brit.* 684.

*T. vaccariæ incano folio perenne*. *Raii Syn.* 305, ed. 2. 175.

---

CONFIDING in the accuracy of Ray, I could not but admit this plant into the *Flora Britannica*, though Hudson's *T. hirtum* was proved, by an authentic specimen, to be only *campestre* with hairy fruit. In 1800 Mr. J. Mackay sent me the true plant from Perthshire, found by Mr. Miller; and the following year I received a variety with smooth fruit, gathered in Perthshire and Angusshire by Mr. G. Donn. At length fresh wild specimens, but with smooth fruit likewise, discovered by the Rev. G. R. Leathes at Browston, Suffolk, have been sent Mr. Sowerby.

This species differs from *T. campestre*, t. 1385, in having a perennial woody root, more oblong and less tumid pouches, whose sides are often very hairy, and when destitute of hairs are but obscurely dotted, never so scaly as in that species. The petals also are much larger, and more conspicuous. But for a new and decisive mark I am obliged to Mr. Leathes, who justly observes that the elongated style, projecting far beyond the lobes of the pouch, will always distinguish this plant from the *campestre*, whose short style is just equal to those lobes. Being perennial, the *hirtum* flowers in June, a month or 6 weeks before the other.

1803



*Occ. 1807. Published by J. Sowerby London.*







THLASPI perfoliatum.

*Perfoliate Shepherd's Purse.*

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* notched, inversely heart-shaped, with several seeds: valves boat-like, their keels forming the border: partition contrary to the valves.

SPEC. CHAR. *Pouch* exactly inversely heart-shaped. Stem-leaves heart-shaped, sharpish at the base, clasping the stem, which is branched. Style very short.

SYN. *Thlaspi perfoliatum.* Linn. *Sp. Pl.* 902. Sm. *Fl. Brit.* 685. *Huds. ed.* 1. 246. *With.* 569. *Hull. ed.* 2. 191. *Sibth.* 199. *Jacq. Austr. t.* 337.

*T. alpestre.* *Huds.* 282. *Dicks. H. Sicc. fasc.* 6. 5.

*T. perfoliatum minus.* *Raii Syn.* 305.

*T. rotundifolium.* *Ger. em.* 266.

WE know not that this species of *Thlaspi* has been observed any where in Britain, except in the limestone part of Oxfordshire, about Witney and Burford, where it is abundant in the spring, and from whence our specimen came.

The root is fibrous and annual. Stem branched from the very bottom, except on poor ground, usually from four to six inches high, spreading, roundish, smooth, leafy. Leaves glaucous, smooth, slightly toothed; the radical ones stalked, ovate, obtuse; the rest sessile, alternate, heartshaped, clasping the stem with their, more or less acute, base. Flowers white, small, in dense corymbose heads, gradually lengthened out into long clusters of seed-vessels, which are precisely obcordate, smooth, glaucous, their lobes extending far beyond the very short style. Stigma capitate. Seeds many in each cell. The petals are blunt and undivided. The calyx spreading, concave, purplish.



*Barbarea officinalis* L.





THLASPI alpestre.  
*Alpine Shepherd's Purse.*

TETRADYNAMIA *Siliculosa.*

GEN. CHAR. *Pouch* notched, with many seeds: valves boat-like, their keels forming the border of the fruit: partition contrary to the valves.

SPEC. CHAR. *Pouch* inversely heart-shaped. Leaves glaucous, slightly dentated, embracing the simple stem; radical ones on footstalks. Petals about the length of the calyx. Seeds numerous.

SYN. Thlaspi alpestre. *Linn. Sp. Pl.* 903.

T. montanum. *Hudf. Fl. An.* 282. *Witb. Bot. Arr.* 674.

T. foliis Globulariæ. *Raii Syn.* 305.

GATHERED by Dr. Smith, July 4th 1792, at Matlock, where it grows abundantly on the lime-stone rocks. 'Tis doubtful whether the root be more than biennial. Certainly Ray is mistaken in saying it creeps. The radical leaves form a thick tuft, out of which arises one central stem, rarely branched, which flowers early in summer; the lateral stems are afterwards numerous, mostly unbranched, and produce a second crop of flowers in July and August, as in the *Iberis nudicaulis*. The whole herb is glaucous, somewhat succulent, bitter and pungent in taste and smell, yet horses and cows seem to feed it down. The petals are white, slightly notched, about the length of the calyx, sometimes a little shorter or longer. Antheræ and calyx purplish. Seeds three or four in each cell.

Great confusion, originating with Mr. Hudson, has arisen about the English species of Thlaspi. This plant is certainly his montanum, though the alpestre of Linnæus, as appears from the Herbarium and description of the last-mentioned author. The Linnæan montanum differs from ours, in having much larger petals, leaves more entire, a creeping root, and only one or at most two seeds in each side of the pod. Its antheræ too are yellow. We believe it to be a stranger to our island. Thlaspi alpestre of Hudson is really the perfoliatum of Linnæus, as it stood in the 1st edition of *Flora Anglica*, and is an annual branched plant, with dentated leaves and small flowers. Those who like to guess at hybrid plants might suppose our alpestre to be produced between perfoliatum and montanum; but we would not hazard any such supposition, believing them three naturally very distinct species, only having several characters in common. The great fruitfulness of this species is a pretty positive proof against its being a hybrid.

It is necessary to remark that Dr. Withering, having taken up these plants from Mr. Hudson, has much confused their history by misapplying the accounts given of each in different authors.











[ 1485 ]

## THLASPI Bursa-Pastoris.

*Common Shepherd's Purse.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* notched, inversely heart-shaped, with several seeds: valves boat-like, their keels forming the border: partition contrary to the valves.

SPEC. CHAR. *Hairy*. *Pouch* inversely heart-shaped, somewhat triangular. Radical leaves pinnatifid.

SYN. *Thlaspi Bursa-Pastoris*. *Linn. Sp. Pl.* 903. *Sm. Fl. Brit.* 687. *Huds.* 283. *With.* 571. *Hull.* 146. *Relh.* 253. *Sibth.* 200. *Abbot.* 141. *Curt. Lond. fasc.* 1. t. 50.

*Bursa Pastoris*. *Raii Syn.* 306.

ONE of the most common of weeds, and, like the generality of such, varying extremely in size and luxuriance, and consequently in the form of its leaves. It is annual, and flowers from the beginning of spring till the end of autumn, ripening copiously its triangular pods or pouches, which gave rise to its name, and which at once distinguish it from all other British plants.

Root small, tapering, branched, exhaling a peculiar smoke-like scent when pulled out of the ground. Whole herb rough with prominent hairs. Stem various in height, generally branched, leafy, each branch terminating in a corymbus of many small white flowers, often tinged with purplish brown. Radical leaves numerous, spreading, pinnatifid and sharply toothed, except in very dry places; stem-leaves oblong, sessile, clasping the stem with their arrow-shaped base. Pouch smooth, with many pendent seeds in each cell. Its margin is scarcely dilated. The style which crowns the pouch is very short.

Small birds eat the seeds and young flowers.

2486



Angl. & 1846. Published by J. L. Sowerby, London.

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## COCHLEARIA officinalis.

*Common Scurvy-grass.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* turgid, rugged; valves gibbous, obtuse. *Calyx* spreading, concave.

SPEC. CHAR. Radical leaves roundish; those on the stem oblong, and somewhat sinuated. Fruit globose.

SYN. *Cochlearia officinalis*. *Linn. Sp. Pl.* 903. *Huds.* 283. *With.* 571.

*Cochlearia*. *Rail Syn.* 302.

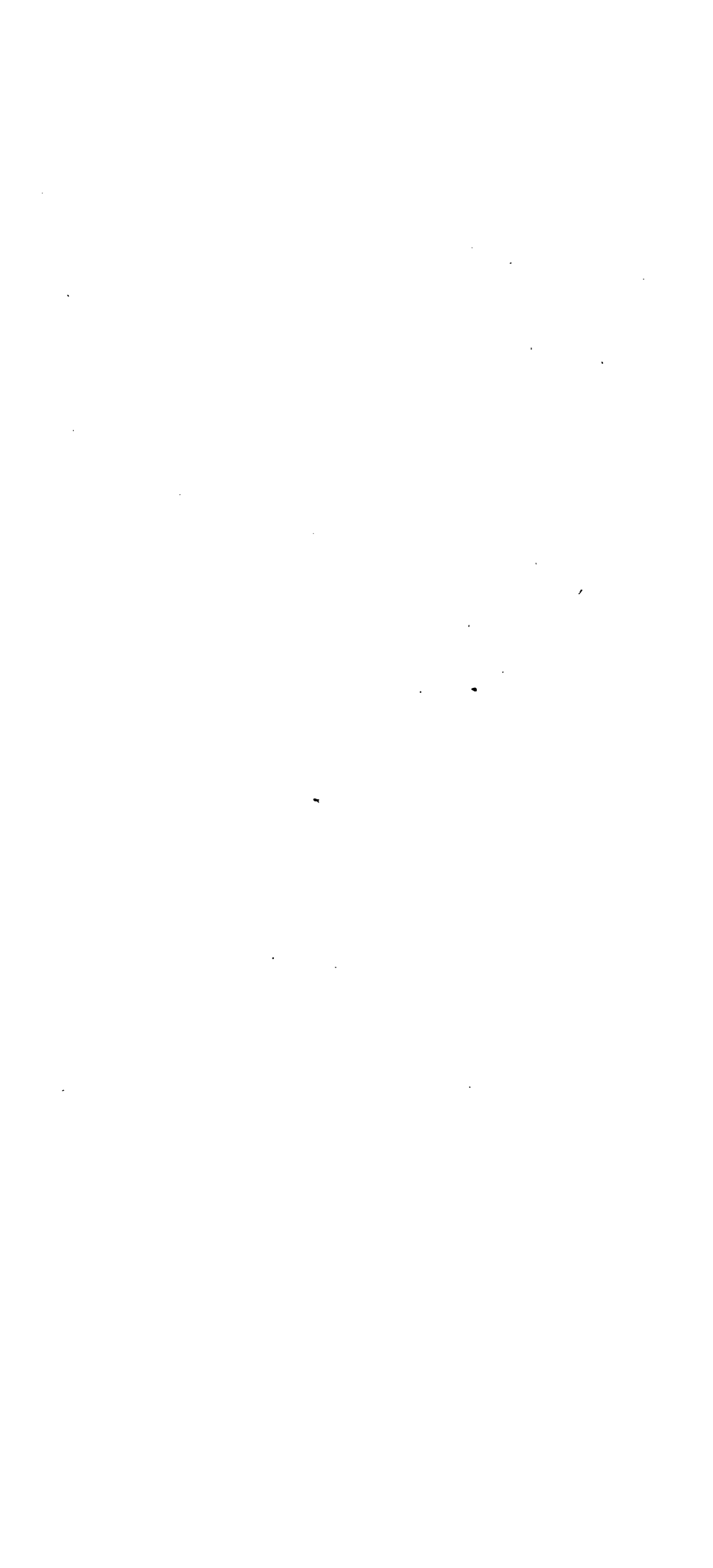
COMMON on the sea-coast in muddy or rocky places, and like the *Statice Armeria*, and a few other sea plants, it is also found in alpine situations far inland. Ray tells us he sowed the seed of the mountain variety, which is smaller, in his garden, where it produced plants of the size and appearance of those that grow on the coast. Yet Dr. Richardson and Dillenius, in the next paragraph of the *Synopsis*, contradict this, saying the plants from Wales and Craven yearly sowed themselves in their garden, and continued unchanged. Their plant therefore should seem to be *C. groenlandica*, which by the Linnæan specimen, and one I had long ago from Mr. Curtis's garden, appears to be distinct from *officinalis*.

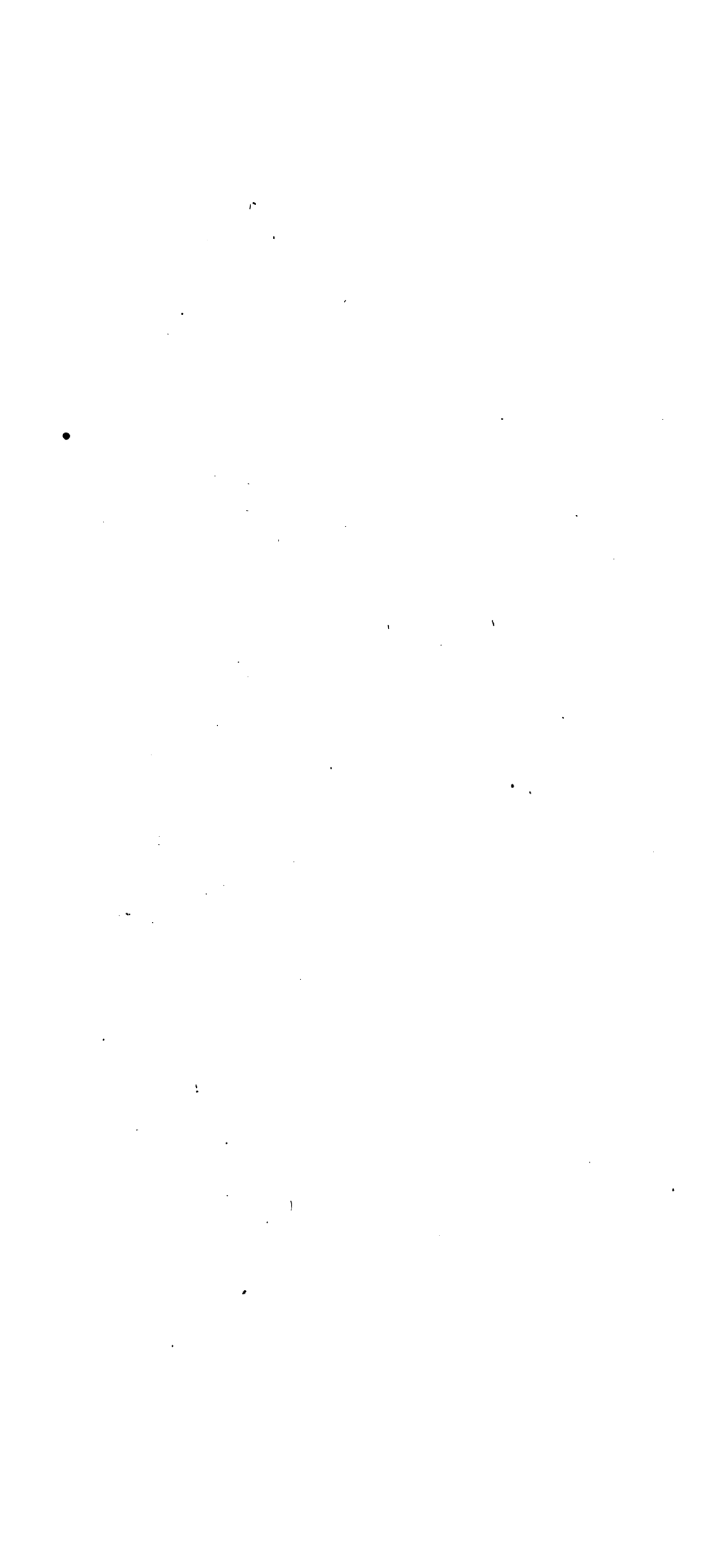
The common Scurvy-grass, here delineated from wild Norfolk specimens, varies very much in size and luxuriance. Its root is annual. Stems angular, smooth, branched in a corymbose manner, and in the month of May ornamented with numerous tufts of white flowers. Leaves all smooth and rather succulent; the radical ones on long footstalks, of a roundish kidney-shape, a little waved or angular; the stem-leaves are sessile, embracing the stem, alternate, oblong, angular or sinuated. Flowering branches corymbose, soon lengthened out into spikes. Bractæ none. Calyx-leaves ovate, obtuse, concave. Petals obovate, blunt, entire, with longish claws. Stamina 6, incurved. Pouch globular, crowned with a short style, very slightly rugose, and scarcely perceptibly veined, by which this species is distinguished from the *anglica* and *danica*, whose capsules are elliptical, and very strongly marked with net-like prominent veins.





1759. *Brassica* by J. A. Smith, London.







COCHLEARIA groenlandica.

*Greenland Scurvy-grass.*

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TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* turgid, rugged; valves gibbous, obtuse. *Calyx* spreading, concave,

SPEC. CHAR. Leaves kidney-shaped, fleshy, entire. *Pouch* globose.

SYN. *Cochlearia groenlandica*. Linn. Sp. Pl. 904. Sm. Tr. of Linn. Soc. v. 10, 344.

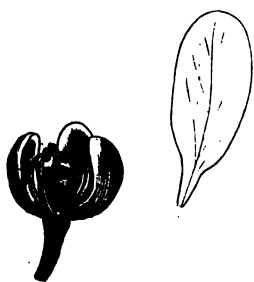
*C. minima*, erecta et repens, insulæ Aalholmianæ. Willius in Bartholin. Act. Hafniæ, v. 3, 143, f. 144.

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MUCH doubt has existed among the students of British plants respecting *Cochlearia groenlandica*, for which, what we judge to be a variety of *officinalis* t. 551, has often been taken. Whether the present may possibly be another variety of that common species we dare not absolutely determine, but it seems very different, and we can positively assert it to be the Linnean *groenlandica*.

This was found on the mountains of Clova, Angusshire, and at Loch-ne-gare, in August 1807, by Mr. Geo. Don. The root consists of numerous fibres, and is said to be annual. Radical leaves on long stalks, very fleshy, convex beneath, roundish-kidney-shaped, entire: those of the stem more oblong, nearly sessile, sometimes with a tooth at each side. Flowers large and numerous, white tinged with purple: one cluster sessile at the root, the rest terminating the branches. *Pouch* globose, with a short style, as in *C. officinalis*.

2403.



*N. l. n. 2, published by J. J. Kewley, London.*





## COCHLEARIA anglica.

*English Scurvy-grass.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* turgid, rugged; valves gibbous, obtuse. *Calyx* spreading, concave.

SPEC. CHAR. Radical leaves ovate, entire; those on the stem lanceolate, toothed. Fruit elliptical, reticulated with veins.

SYN. *Cochlearia anglica*. Linn. *Sp. Pl.* 903. *Huds.* 284. *With.* 574. *Fl. Dan. t.* 329.

*C. folio sinuato.* *Raii Syn.* 303.

NOT unfrequent in a muddy soil on the Norfolk coast, from whence Mr. D. Turner communicated these specimens. It is found also in Essex, Kent, and the south of England, flowering about May. The root is annual. This differs from the *C. officinalis* at first sight in being smaller. Its stem-leaves are narrower, lanceolate rather than ovate, toothed rather than sinuated, and often nearly entire or but slightly waved. The radical ones are very unlike those of the *officinalis*, being much smaller in proportion to the others, lanceolate or ovate, and for the most part perfectly entire. In the flowers of these two plants little difference is to be found; and indeed their herbage is so variable, that all we have hitherto mentioned would hardly discriminate them; and Mr. Hudson's conjecture of their being mere varieties might be assented to, did not the fruit afford certain and clear marks of distinction. The pouches of the *C. anglica* are larger than those of the last species, elliptical, crowned with a style one third of their own length; they are all over strongly marked with a net-work of prominent veins, scarcely at all to be perceived in those of the more common kind.

*C. danica* differs from both these in its triangular leaves, which all stand on footstalks. Its fruit agrees with *C. anglica*.



*Fest. 1799. Botanicals of Linnaeus. London.*







## COCHLEARIA danica.

*Danish Scurvy-grass.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* turgid, rugged; valves gibbous, obtuse. *Calyx* spreading, concave.

SPEC. CHAR. Leaves all deltoid, on footstalks. Fruit elliptical, reticulated with veins.

SYN. *Cochlearia danica*. *Linn. Sp. Pl.* 903. *Sm. Fl. Brit.* 689. *Huds.* 284. *With.* 573. *Hull.* 144. *Fl. Dan. t.* 100.

*C. marina*, folio anguloso parvo. *Raii Syn.* 303.

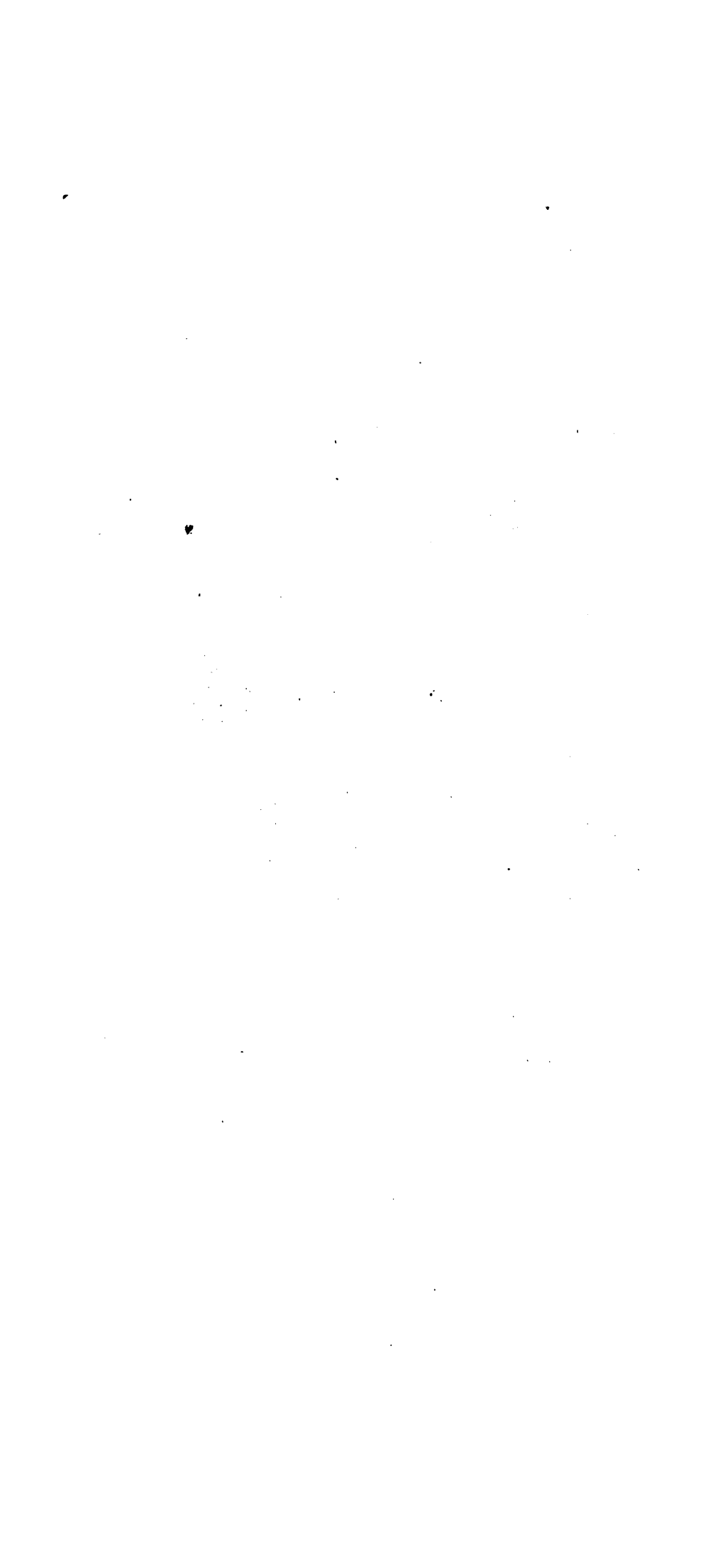
**L**AWSON appears to have discovered this plant in Walney island, Lancashire, and Mr. Llwyd afterwards in Anglesea. It has been but little known, and many persons have suspected it to be a variety of *C. anglica*, but without the least foundation. Mr. Crowe some years ago detected it in salt marshes at Wells, Norfolk. Mr. D. Turner and Mr. Sowerby observed it in several parts of the southern coast from Portland island to the Land's end, and gathered our present specimen. It is annual, flowering from May or June till late in the summer.

This species is always smaller than those figured in *t.* 551 and 552, though like them it varies in size. The root is fibrous. Stems spreading, about four inches high, mostly simple. Leaves all on longer or shorter footstalks, uniform, deltoid or trowel-shaped, with three (rarely five) lobes, smooth and shining, having much of an ivy-like appearance, so that Lobel aptly called it *Tblaspi bederaceum*. The flowers are small and white, in a corymbus which is seldom so much elongated as in the other species. Pouches elliptical, flattish, marked with a net-work of veins, and crowned with a short style. Seeds about 6 in each cell, rugose.

If the ivy-like form of the leaves, especially the radical ones, be attended to, this species can never be mistaken. In sensible qualities it agrees with the rest of its tribe.



*Scilla maritima* L.





## COCHLEARIA Armoracia.

*Horse-radish.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* turgid, rugged; valves gibbous, obtuse. *Calyx* spreading, concave.

SPEC. CHAR. Radical leaves oblong, crenate; those of the stem lanceolate, either cut or entire.

SYN. *Cochlearia Armoracia*. Linn. *Sp. Pl.* 904. Sm. *Fl. Brit.* 690. Huds. 284. With. 575. Hull. ed. 2. 192. Relh. 253. Sibth. 200. Woodv. *Med. Bot.* t. 150.

*Raphanus rusticanus*. Rati Syn. 301.

**G**ATHERED in June by the river side at Battersea. The plant is common enough in waste ground, from the refuse of gardens, being most truly wild in the mountainous parts of Yorkshire and Northumberland, where the ground is moist, black and spongy. When once admitted into the deep rich soil of a kitchen garden, no weed is more difficult of extirpation.

The roots are long, cylindrical, white, deep and perennial, well known for the peculiar acrid flavour which makes them acceptable, on many occasions, at the table. Stems two feet high, erect, spreading, branched, smooth, bearing scattered, sessile, lanceolate leaves, more or less jagged or cut. The radical leaves are large, oblong, crenate, veiny, sometimes pinnatifid, but more generally resembling those of a dock. Flowers white, numerous, corymbose, at length racemose. Pouch elliptical, compressed, with a short style, and large stigma. As the roots increase so fast, the fruit is seldom perfected.



*Described by J. E. Smith, London.*

J





[ 1660 ]

CORONOPUS Ruellii.

Common Wart-cress, or Swine's-cress.

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TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* kidneyshaped, compressed, rugged, not separating into valves. *Seeds* 1 in each cell.

SPEC. CHAR. *Pouch* undivided, crested with little sharp points. Style prominent. Flowers not many in a cluster.

SYN. *Coronopus Ruellii*. *Gærtn. v. 2. 293. t. 142. f. 5.*

*Sm. Fl. Brit. 690. Relh. 254. Ger. em. 427.*

*Cochlearia Coronopus*. *Linn. Sp. Pl. 904. Huds. 284.*

*With. 574. Hull. 144. Sibth. 200. Abbot. 141.*

*Mart. Rust. t. 92.*

*Nasturtium supinum*, *capsulis verrucosis. Raii Syn. 304.*

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COMMON in waste places by road sides, on banks, and among rubbish, flowering from June to September.

Root annual. Stems quite prostrate, depressed, branched, leafy, round, smooth. Leaves alternate, pinnatifid, the segments for the most part half pinnatifid, or pectinate, at their fore side. Clusters of flowers opposite to the leaves, corymbose, sessile, short, elongated as the fruit swells. Flowers very small, white. *Pouch* kidneyshaped, compressed, transversely rugged, its plaits extended into little marginal teeth, which form a sort of crest, its summit not divided, but crowned with the little short pyramidal style. Each cell contains a rather large brown seed. The cells are leathery, and never split into valves. The whole herb is somewhat glaucous, slightly succulent, with an unpleasant mustard-like acrid flavour.

No doubt can arise as to the certainty of this genus. We have some exotic species. The only remaining British one is represented in *v. 4. t. 248*, under its Linnæan name of *Lepidium didymum*, and is the *Coronopus didyma*, *Fl. Brit. 691*.



Described, Published by J. G. Sowerby, London.





## LEPIDIUM didymum.

*Procumbent Pepper-wort.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* notched, with many seeds : valves keeled, but not margined : partition contrary to them.

SPEC. CHAR. Stem procumbent, hairy. Leaves pinnatifid. Fruit didymous.

SYN. *Lepidium didymum*. *Linn. Mant.* 92. *Dickf. Dr. Plants*, 11. *With. Bot. Arr.* 671.

*L. anglicum*. *Huds. Fl. An.* 280.

GATHERED by John Adams, Esq. at Dale, a village near the entrance of Milford Haven. Mr. Hudson mentions this species (which escaped Ray and Dillenius) as a native of Devonshire and Cornwall among rubbish. It is an annual, flowering in July, and is in a manner naturalized in Chelsea garden. Our figure, however, has been drawn from real wild specimens, like all the rest in this work when we do not expressly mention the contrary ; for we do not approve of imposing *cultivated* specimens upon the public for *wild* ones, which “ in similar works (according to Mr. Curtis’s just observation, *Bot. Mag.* 154.) every plant is expected to be.”

The roots of *Lepidium didymum* are small and fibrous. Stems procumbent (which Linnæus, having it only in a dried state, did not know), roundish, pilose, alternately branched, leafy. Leaves alternate, smooth, pinnatifid, the lobes notched, especially on the foreside. Spikes generally opposite to the leaves, many-flowered, and soon lengthened out into racemi. Flowers very small, with 2 or 4 stamina, scarcely more. Pouch very distinctly two-lobed, rugged, and much resembling that of *Cochlearia Coronopus*, to which this plant is very nearly related as to generic character ; and indeed Linnæus says, it is an intermediate species between the two genera. *Mant.* 92.



Aug 1 1793. *Helianthus* *diversiflorus*

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I B E R I S amara.

*Bitter Candy tuft.*

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T E T R A D Y N A M I A *Siliculosa.*

GEN. CHAR. *Corolla* irregular, the two extended petals being the largest. *Pouch* with many seeds, notched.

SPEC. CHAR. Stem herbaceous. Leaves lanceolate, pointed, a little indented. Flowers racemose.

SYN. *Iberis amara.* *Linn. Sp. Pl.* 906. *Huds. Fl. An.* 285. *With. Bot. Arr.* 682.

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**B**ROUGHT from the fields about Wallingford, Berkshire, where it is very common, in July last, by Dr. Smith. The stems are diffuse, numerous, and each terminated by a racemus or spike of flowers, which are copious, and of a bright unspotted white, so as to be very conspicuous at a distance. The beauty of this plant has indeed procured it a place in our gardens among other hardy annuals, where it grows much more luxuriantly than on its native chalky soil. The whole herb is nauseously bitter, as are several others of this genus.



v



I B E R I S nudicaulis.

*Naked-stalked Candy-tuft.*

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TETRADYNAMIA *Siliculosa.*

GEN. CHAR. *Cor.* irregular, the two external petals being the largest. *Pouch* with many seeds, notched.

SPEC. CHAR. Stem herbaceous, naked and simple. Leaves sinuated.

SYN. *Iberis nudicaulis.* Linn. *Sp. Pl.* 907. Huds. *Fl. An.* 285. *Willd. Bot. Arr.* 682. *Relh. Cant.* 249. *Curt. Lond. fasc.* 6. t. 42. *Dicks. Hort. Sicc. fasc.* 1. 10.

*Nasturtium petræum.* *Raii Syn.* 303.

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THERE are but two species of *Iberis* found in Britain, neither of them very common. The *amara* has been already figured in this work, plate 52. That now before us is found on a dry gravelly soil in several places about London, Norwich and Bury. We received it from W. Matthew, Esq. in flower, May 9th, 1793, being quite a spring plant.

Root annual. Herb varying much in size according to the greater or less luxuriance of the soil, and consisting of several leaves of a lyrate form (a few of them generally entire), spreading flat upon the ground. Stalks several, unbranched; the central one always erect and naked, the others spreading or decumbent, often bearing one or two leaves. Flowers white, in a small corymbus, afterwards lengthened out into a spike, on compressed flower-stalks. Calyx of four equal, concave, purplish leaves. Inner or upper petals as long as the calyx; outer ones about twice as long; all entire. Stamina all very nearly equal in length, though the two outer ones, being more spreading, seem the shortest, all of them bearing, on their inner side, near the base, a very singular petal-like appendage, which authors have not much noticed. Pouch curved upwards, concave above, convex below.



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## ISATIS tinctoria.

*Wood.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* lanceolate, one-celled, single-seeded, deciduous, with two boat-like valves.

SPEC. CHAR. Radical leaves crenated, stem leaves arrow-shaped. Pouch oblong.

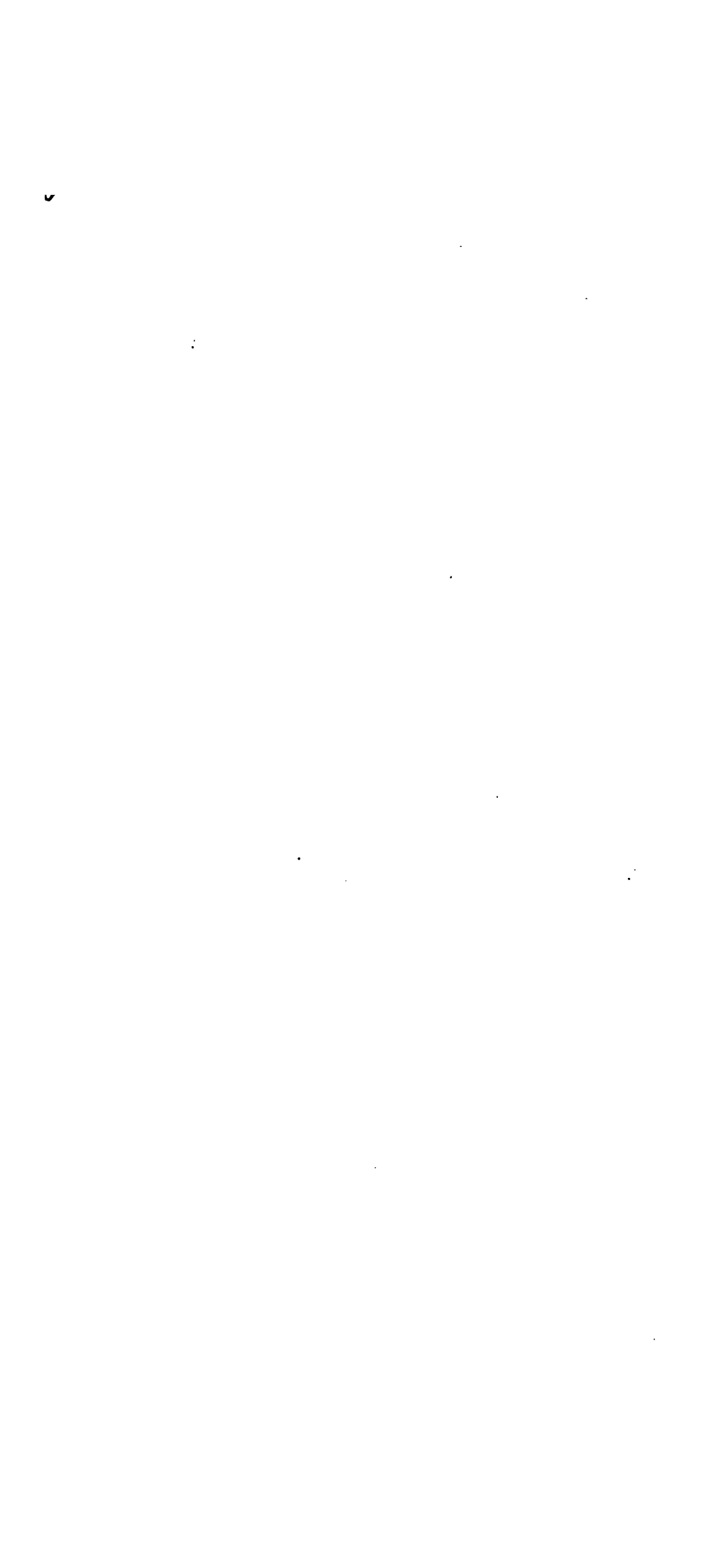
SYN. *Isatis tinctoria.* *Linn. Sp. Pl.* 936. *Huds. Fl. An.* 299. *Wurb. Bot. Arr.* 717. *Relb. Cant.* 259. *Glastrum sativum.* *Raii Syn.* 307.

NOT a native of our island originally; at least being according to Linnæus a maritime plant, and yet always found with us in and about cultivated fields; it should seem to have become naturalised from its frequent culture for the purpose of dyeing blue. Yet we are told by Pliny the ancient Britons painted their bodies with it. If Pliny's plant be ours, which is very probable, it must be a native.

The root is biennial. Stem erect, branched, round, set with alternate somewhat succulent leaves. The radical leaves only stand on long footstalks, and are crenated. Not only the corolla, but the calyx is yellow. The seed vessels dark brown. A few hairs are sometimes found on the stem and leaves. The flowers appear in July.

Although no admirers of whimsical innovation, especially in an artificial system, we cannot but think judicious corrections strengthen any system, and certainly lead to truth. We therefore adopt Professor Schreber's alteration of Linnæus in placing this genus, with *Bunias* and *Crambe*, in the order *Siliculosa*, to which they so evidently belong one is quite at a loss to conceive on what principle they could be placed among *Siliquosa*. Even Linnæus in his specific characters of these plants uses the term *siliculis*, and most systematic authors have placed them near *Draba*, *Lepidium*, &c.







## BUNIAS Cakile.

*Sea Rocket.*TETRADYNAMIA *Siliculosa.*

GEN. CHAR. *Pouch* deciduous, square, the angles unequal and sharp.

SPEC. CHAR. *Pouch* ovate, smooth, two-edged. Leaves succulent.

SYN. *Bunias Cakile.* *Lim. Sp. Pl.* 936. *Huds. Fl. An.* 298. *Willd. Bot. Arr.* 716.

*Cakile quibusdam, aliis Eruca marina et Raphanus marinus.* *Raii Syn.* 307.

A COMMON annual on sandy sea-shores, flowering from June to September, and making a very ornamental appearance.

From an Inconsiderable root rises a very bushy branched stem, spreading in every direction, with branches so zigzag and twisted that there is scarcely a straight line about them. Leaves alternate, thick and succulent, rather glaucous, smooth, more or less deeply pinnatifid and toothed, their segments all obtuse, each tipped with a minute, seemingly glandular, point. Flowers in dense terminal corymbi, which afterwards grow out into spikes. Their habit is something like those of a *Cheiranthus*, but the singular pod characterizes the genus as well as the species. Its form is ovato-lanceolate, with four sharp edges, but compressed so that two opposite edges are much the most prominent; their interstices are ribbed, but not (as in some species) tuberculated. Seed single. The pod or pouch falls off when ripe, leaving a singular quadrangular receptacle.

This plant abounds with alkaline salt, and has the pungent mustard flavour of its class.



*Brassica cauliflora* (L.) DC. - *Brassica cauliflora* (L.) DC.

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C R A M B E *maritima*.*Sea Kale.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* leathery, globular, without valves, deciduous, containing one seed. The four longer *filaments* with a tooth near their summit.

SPEC. CHAR. Leaves sinuated, waved, glaucous, smooth as well as the stem.

SYN. *Crambe maritima*. *Linn. Sp. Pl.* 937. *Sm. Fl. Brit.* 695. *Huds.* 299. *With.* 563. *Hull.* 143.

*C. maritima*, *Brassicæ folio*. *Raii Syn.* 307.

A NATIVE of sandy sea shores in various parts of England, flowering in May and June. Our specimen grew between Dover and Folkestone. On the north coast of Norfolk the Sea Kale may be found in abundance, and it cannot be overlooked wherever it grows.

The perennial fleshy root is branched at the summit into many branching spreading stems, which, like the whole herb, are smooth, glaucous and succulent. Leaves large, alternate, on stalks, oblong or roundish, waved, variously lobed and toothed. Corymbi terminal, clustered, forming a dense panicle. Flowers numerous, white. Calyx-leaves concave, spreading. Petals with a large, roundish, notched, horizontal limb. Four longer stamina forked or toothed in their upper part, and furnished with a solitary gland at their base. Stigma sessile, peltate. Pouch globose, fleshy, never splitting into valves, but falling off entire, and containing one large seed.

Many persons cultivate this plant for the sake of its young shoots, which sprout forth very early in the spring, and, if slightly covered with sand, never suffer from any degree of cold known in this climate. When boiled they are not much inferior to asparagus, which they somewhat resemble in flavour.



*Alpinia pectinata* (L.) J. Burdett & C. Smith.





## DENTARIA bulbifera.

*Bulbiferous Coral-wort.*TETRADYNAMIA *Siliquosa.*

GEN. CHAR. *Pod* bursting elastically, the valves rolling back. *Stigma* notched. *Calyx-leaves* connected longitudinally.

SPEC. CHAR. Lower leaves pinnated; the uppermost simple.

SYN. *Dentaria bulbifera.* *Linn. Sp. Pl.* 912. *Huds. Fl. An.* 285. *Witb. Bot. Arr.* 683.

THIS rare plant grows wild in some few parts of England, in shady places, especially at Harefield, in a grove now belonging to William Baynes Esq. and in some parts of Buckinghamshire not far from thence. Our specimen was obligingly communicated by the Rev. Dr. Goodenough from his garden at Ealing, where the *Dentaria* is perfectly naturalized, and preserves its original wild appearance.

The root is perennial, creeping horizontally, white, fleshy, and set with alternate tooth-like protuberances, which gave occasion to the generic name. Stem from the terminal bud of the last year, erect, round, simple, 18 to 24 inches high, leafy in the middle and upper part. Leaves alternate; the 2 or 3 lowermost pinnate, of 5 leaflets, some above them of 3, and the upper ones simple, gradually lessening; leaflets all lanceolate, very irregularly and partially serrated, smooth, rather succulent. In the bosom of most of the leaves stands a solitary, oval, scaly, dark purple bud or bulb, which falling off vegetates in the ground, and thus the plant is copiously propagated, like the *Lilium bulbiferum*; consequently its seeds are scarcely ever perfected, as happens to plants that increase much by root. The flowers are in a terminal corymbus, lilac-coloured, large and handsome, appearing early in May. The stigma is roundish, slightly notched.





March 1796. Published by J. B. Smith, London.







[ 2355 ]

## CARDAMINE bellidifolia.

*Daisy-leaved Ladies'-Smock.*

## TETRADYNAMIA Siliquosa.

GEN. CHAR. Pod bursting elastically, the valves turning back, equal to the partition. *Stigma* entire. *Cal.* a little spreading. One gland on each side, between the shorter stamina and the calyx.

SPEC. CHAR. Leaves simple, ovate, entire, about one third the length of their footstalks.

SYN. *Cardamine bellidifolia*. Linn. *Sp. Pl.* 913. *Fl. Lapp. ed.* 2. 222. *t.* 9. *f.* 2. Sm. *Fl. Brit.* 697. *With.* 577. *Hull ed.* 2. 194. *Fl. Dan. t.* 20. *Jacq. Misc. v.* 1. 148. *t.* 17. *f.* 2.

DR. WITHERING is our only authority for considering this alpine plant as a native of Britain. He mentions having had wild specimens, gathered in Scotland, from Mr. Milne, formerly curator of the Oxford garden. We have never seen or heard of it from any of our British correspondents, but have gathered it on the alps of Savoy, where it grows about little rills in boggy ground, flowering at various periods during summer. We are therefore obliged to have recourse to exotic specimens, little changed by drying, and we can answer for the correctness of the annexed figure. As Lapland, Norway, Austria, and Switzerland produce this *Cardamine*, it might be expected to grow in Scotland. We have already mentioned, under *Arabis stricta*, *t.* 614, that it is not *C. pumila*, *bellidis folio*, *alpina* of Ray, or of Gerarde.

The root is perennial, rather woody. Stems several, an inch or two high, naked or leafy, smooth like every other part. Leaves ovate, entire, or slightly wavy; the radical ones numerous, on long stalks; the rest sometimes nearly sessile. Flowers corymbose, few, with white upright petals, twice the length of the calyx. Pod linear, obtuse, corrugated, destitute of hairs.

2355



*Prunella parviflora* L.





## CARDAMINE hastulata.

*Alpine Ladies-smock.*

TETRADYNAMIA Siliquosa.

GEN. CHAR. Pod bursting elastically, the valves turning back. Stigma entire. Cal. a little spreading. One Gland on each side, between the shorter stamina and the calyx.

SPEC. CHAR. Radical leaves hastate or lyrate; stem-leaves lanceolate, entire.

SYN. Cardamine petraea. *Lightf.* 347. t. 15. f. 2.

SENT by Mr. Mackay from Scotland, where it grows in alpine situations upon moist rocks and about rivulets, flowering in July.

Root perennial, long and somewhat woody, branching at the summit, and crowned by several tufts of spreading leaves, which are small, slightly succulent, halbert-shaped, sometimes (having two small additional lobes towards the base) becoming lyrate; the lobes are mostly entire, scarcely ever toothed. The leaves on the stem, except one or two at the bottom, are alternate, lanceolate approaching to elliptical, obtuse, entire, with never more than one solitary notch in any of them, and that rarely. Stem erect, round, smooth, a little branched, bearing spiked clusters of pedunculated flowers, rather large in proportion to the plant, white or purplish. Calyx a little spreading, its edges white. Petals spreading, entire. Stigma simple, obtuse. Valves of the pod bursting from the base and in some degree recurved.

That this is the plant Mr. Lightfoot intended, we know by specimens from himself and Mr. Stuart. His figure indeed is not extremely correct; but his description, which seems to be original, is very good. We have received from Mr. Jacquin jun. for *C. petraea*, a specimen differing from ours only in having the radical leaves less deeply lobed, and scattered with a few simple white hairs, whereas ours are quite smooth, except that one specimen has a few such hairs on the leaf-stalks. The true Swedish *C. petraea* of Linnæus is however a different plant, with oblong many-toothed smooth leaves, more near to Jacquin's than to ours, so that we have been obliged to choose a new name. Neither dare we quote the Welch plant of Ray, Dillenius, Hudson, and Withering, which upon the most accurate scrutiny we believe to be *Arabis hispida* of Linnæus, by mistake called *Sisymbrium arenosum* in his Flo. Suec. the latter not being a native of Sweden. In this *Arabis* the leaves are lyrate with several lobes, and clothed with forked and branched hairs; the pods burst at the top first, then at the bottom, and the valves do not curl back; so that it is no *Cardamine*. We recommend it to the examination of Welch botanists. We have a specimen of the same (without fructification) gathered in Scotland by a Mr. Lindeley in 1728, evidently different from our *C. hastulata*. Flo. Dan. t. 386 seems intended for this *Arabis hispida*.









C A R D A M I N E impatiens.

*Impatient Ladies-smock.*

T E T R A D Y N A M I A *Siliquosa.*

GEN. CHAR. *Pod* bursting elastically, the valves turning back. *Stigma* entire. *Cal.* a little spreading. One *Gland* on each side, between the shorter stamina and the calyx.

SPEC. CHAR. Leaves pinnated; leaflets lanceolate, mostly cut. *Stipulæ* ciliated.

SYN. Cardamine impatiens. *Linn. Sp. Pl.* 914. *Huds. Fl. An.* 294. *With. Bot. Arr.* 685. vulgo *Sium minus impatiens.* *Raii Syn.* 299.

SENT by Dr. Smith from Matlock July 4th, 1792. It was gathered by the river side under a high perpendicular rock immediately below Saxton's bath. This is a rare plant in most places, though not so in Westmoreland and Cumberland.

Root annual. Herb about twelve or eighteen inches high, erect, pale and tender in appearance, with almost invisible flowers, and chiefly remarkable for its numerous pods, which discharge their ripe seeds with great force on the slightest touch or motion. The stem is angular and hollow, more or less zigzag. Leaves smooth, paler beneath; extended at the base into two narrow, acute, singularly ciliated stipulæ, by which the species is well distinguished from all others known. Linnæus at first described the flowers as being destitute of petals, but afterwards acknowledges he found some in a cultivated plant. Mr. Hudson justly observes that some flowers are without, and that in those which have them they are scarcely longer than the calyx, white, and of very short duration.

The taste of this species is pungent, like the rest of its tribe, bitterish and unpleasant. We do not know of its being applied to any use.



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## CARDAMINE hirsuta.

*Hairy Ladies'-Smock.*

## TETRADYNAMIA Siliquosa.

GEN. CHAR. *Pod* bursting elastically, the valves turning back. *Stigma* entire. *Cal.* a little spreading. One *Gland* on each side, between the shorter stamina and the calyx.

SPEC. CHAR. Leaves pinnated; leaflets roundish or oblong, notched, on footstalks. *Stipulæ* none.

SYN. *Cardamine hirsuta*. *Linn. Sp. Pl.* 915. *Huds.* 295. *With.* 578. *Sibth.* 205. *Curt. Lond. fasc.* 4. t. 48. *Lightf.* 348.

*C. flexuosa.* *With.* 578.

*C. parviflora.* *Lightf.* 1104. *With. ed.* 2. 686.

*C. impatiens altera hirsutior.* *Raii Syn.* 300.

**F**REQUENT in moist shady places, gardens, and gravelly waste ground, flowering in the spring, and varying much luxuriance, as well as in degree of hairiness.

Root annual, fibrous, white. Stem from 3 to 12 inches high, erect, more or less branched, leafy, angular, generally zigzag, clothed with scattered prominent hairs. Leaves pinnated, alternate; the leaflets of the lowermost round or heart-shaped, the rest oblong, all of them notched, more or less hairy, rarely quite smooth, standing on footstalks, opposite or alternate. *Stipulæ* wanting. Flowers small, white, numerous, in a terminal corymbus soon lengthened out into a spike. Stamina generally 6, but in early or starved flowers 2 of them are often wanting. Seeds numerous, small.

Some of our British botanists have been much in doubt about this plant. To us it is clear that all the synonyms above cited belong to only one species, nor do they even express a marked variety. Luxuriant specimens are most zigzag, starved ones most hairy. The *C. parviflora* of Linnæus is a very distinct species, not hitherto observed in Britain.

*C. hirsuta* is eatable in a young state as a salad, having the flavour of the water cress, yet it has not come into general use. It is, in some gardens, a troublesome weed; for the radical leaves spread close to the ground, and effectually smother more delicate seedlings.









CARDAMINE pratensis.

*Meadow Ladies'-Smock.*

TETRADYNAMIA Siliquosa.

GEN. CHAR. *Pod* bursting elastically, the valves turning back, equal to the partition. *Stigma* entire. *Cal.* a little spreading. One *Gland* on each side, between the shorter stamina and the calyx.

SPEC. CHAR. Leaves pinnate; leaflets of the radical ones roundish and toothed; those of the stem lanceolate.

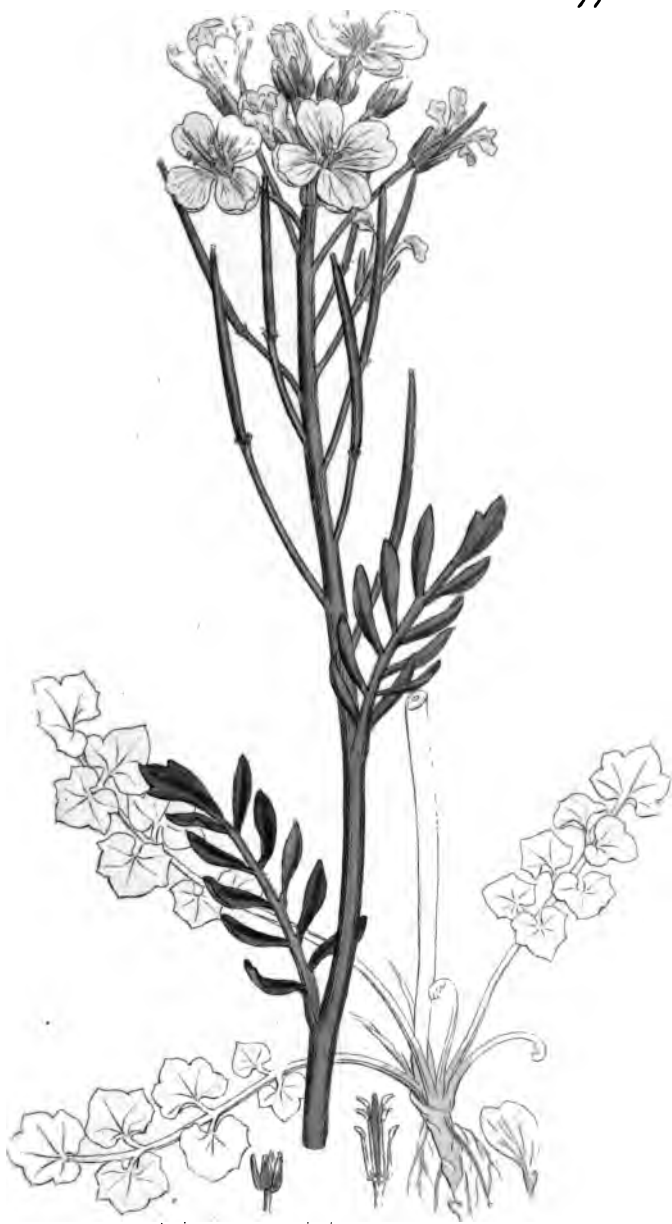
SYN. *Cardamine pratensis.* *Lin. Sp. Pl.* 915. *Sm. Fl. Brit.* 699. *Huds.* 294. *With.* 579. *Hull.* 149. *Relb.* 255. *Sibth.* 205. *Abbot.* 142. *Curt. Lond. fasc.* 3. t. 40. *Mart. Fl. Rust.* t. 95. *Woodv. Med. Bot.* t. 30.

*Cardamine. Raii Syn.* 299.

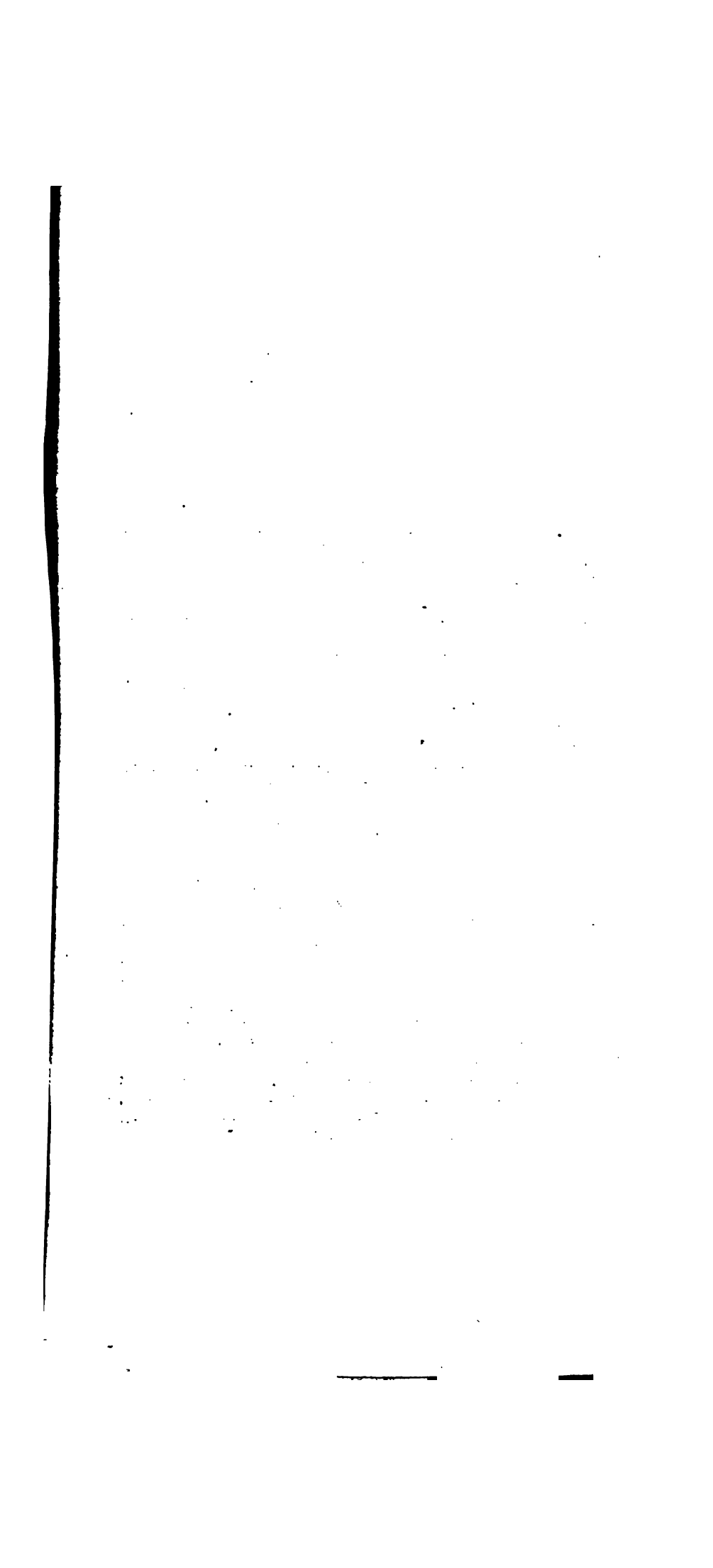
COMMON in meadows and moist pastures, which it agreeably enlivens in the spring with its white or pale purplish blossoms. The English name is supposed to have originated from the appearance of linen bleaching which a profusion of



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[ 1000 ]

## CARDAMINE amara.

*Bitter Ladies'-Smock.*TETRADYNAMIA *Siliquosa.*

GEN. CHAR. *Pod* bursting elastically, the valves turning back, equal to the partition. *Stigma* entire. *Cal.* a little spreading. One *gland* on each side, between the shorter stamina and the calyx.

SPEC. CHAR. Leaves pinnate; leaflets of the radical ones roundish; those of the stem toothed or angular. Stem taking root at the base.

SYN. *Cardamine amara.* *Linn. Sp. Pl.* 915. *Sm. Fl. Brit.* 699. *Huds.* 294. *Walt.* 580. *Hull.* 149. *Sibth.* 206. *Curt. Lond. fasc.* 3. t. 39. *Lichtf.* 350.

*C. flore majore elatior.* *Raii Syn.* 299.

EITHER this species of *Cardamine* is really very scarce in Britain, or it has been sometimes overlooked as a white variety of the common *C. pratensis*. From that it may nevertheless be always distinguished, on the most casual view, by the violet hue of its antheræ. When accurately compared many decisive points of difference will be found

1001.



*Cruciferae, Brassica, B. caulorapa*

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SISYMBRIUM Nasturtium.

*Water Cress.*

*TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. Pods declining. Leaves pinnate : leaflets roundish heart-shaped.

SYN. *Sisymbrium Nasturtium.* *Linn. Sp. Pl.* 916. *Sm. Fl. Brit.* 700. *Huds.* 296. *With.* 580. *Hull.* 150. *Relb.* 256. *Sibth.* 286. *Abbot.* 143. *Curt. Lond. fasc.* 6. t. 44. *Woodv. Med. Bot.* t. 48.

S. Cardamine, seu *Nasturtium aquaticum.* *Rail Syn.* 300.

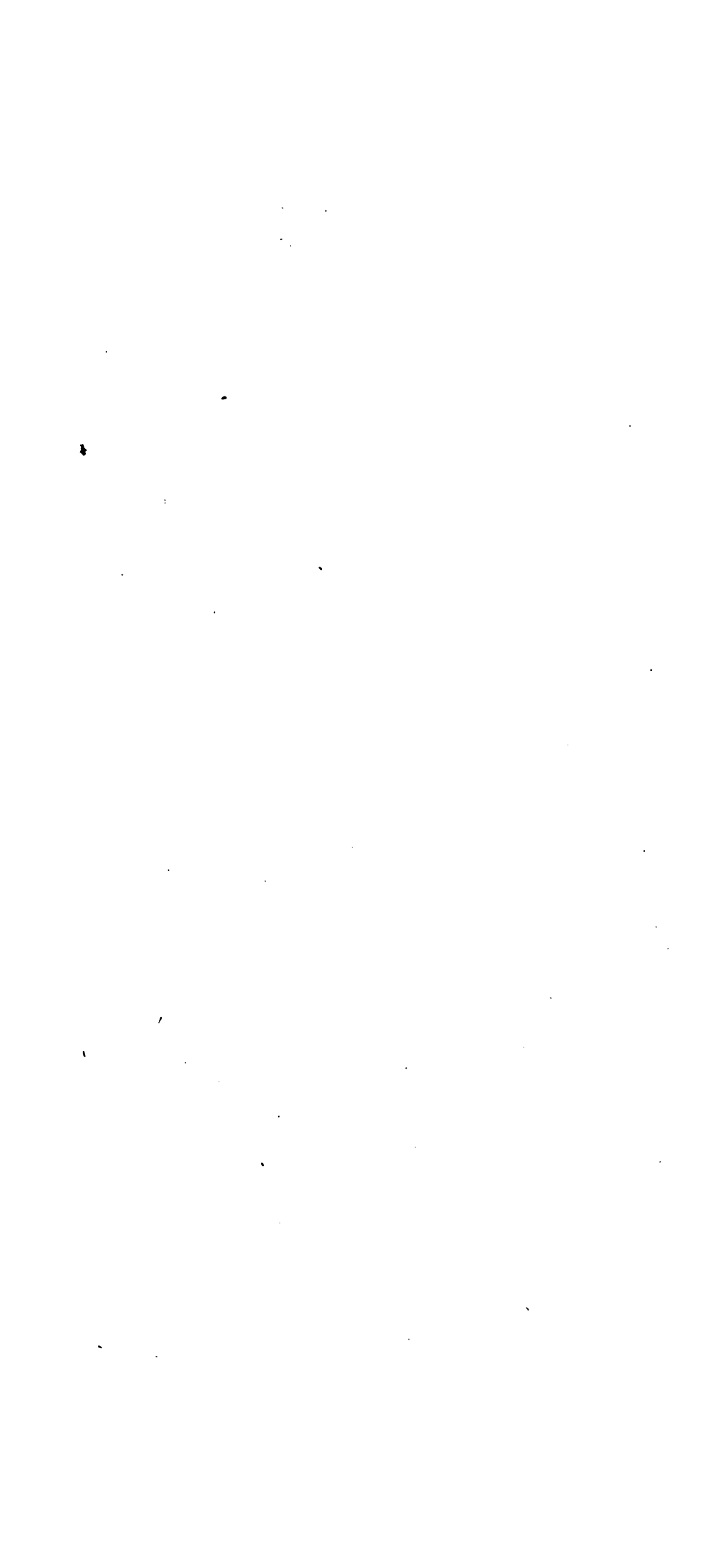
**V**ERY abundant in clear springs, rivulets and ponds, generally supported on the surface by its floating leaves, but often rising above it, especially when the flowers appear, in June and July.

The roots are perennial, consisting of long white fibres, the lowermost fixed in the soil, the rest suspended in the water. Stems spreading, declining or floating, angular, branched, leafy. Leaves alternate, pinnate, somewhat lyrate (the terminal and upper leaflets being the largest); all the leaflets roundish, more or less heart-shaped, smooth, shining, waved or toothed, frequently tinged with a purplish-brown hue. Flowers white, in a corymbus, soon lengthened out into a spike. Pods shortish, standing on horizontal fruit-stalks, but the pods themselves are recurved upwards. Stigma nearly sessile.

The flavour of the young leaves is pleasantly warm and pungent, something like that of mustard, and agreeable to most people. No British plant is so generally used as a salad. Its expressed juice, combined with those of Brooklime and Scurvy-grass, forms a popular medicine for purifying the blood, as we have already mentioned, vol. 10. p. 655.







SISYMBRIUM sylvestre.

*Creeping Water Rocket.*

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TETRADYNAMIA Siliquosa.

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. *Pods* declining. *Leaves* pinnate; leaflets lanceolate, deeply serrated or cut.

SYN. *Sisymbrium sylvestre.* *Linn. Sp. Pl.* 916. *Sm. Fl. Brit.* 701. *Hull. ed.* 2. 194. *Huds.* 296. *With.* 581. *Relh.* 257. *Sibth.* 206. *Abbot.* 143. *Curt. Lond. fasc.* 3. t. 41.

*Eruca aquatica.* *Raii Syn.* 297.

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**G**RAVELLY moist situations produce this plant in various parts of England. In Tothill fields it abounds, as well as at Battersea, Hammersmith, &c. flowering from June to September.

The root is perennial, creeping extensively, so that the pods scarcely ever arrive at perfection. Stems erect, a foot or more in height, leafy, zigzag, angular, furrowed, roughish to the touch. Leaves alternate, pinnate, smooth; the leaflets of the lower ones decurrent, elliptic-oblong, deeply cut or toothed; those of the upper ones narrower, deeply, but sparingly, serrated, sometimes quite entire, and in some measure stalked. Common footstalk channelled. Clusters numerous, forming a kind of panicle about the tops of the stems, each of them soon lengthened out to a great extent, and becoming zigzag. Flowers of a full yellow, rendering the plant conspicuous by their colour and abundance. Style short.



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**SISYMBRIUM** terrestre.

*Annual Water Rocket.*

**TETRADYNAMIA** *Sisymbrium*.

**GEN. CHAR.** Pod cylindrical, bursting with nearly straight valves. Cal. and Cor. spreading.

**SPEC. CHAR.** Pods declining, turgid. Leaves pinnatifid, unequally toothed. Root simply fibrous. Petals scarcely so long as the calyx.

**SYN.** *Sisymbrium terrestre*. *Cart. Lond. fasc. 5. t. 49.*  
*Sm. FL Brit. 701. With. 582. Hull. 150.*  
*Retk. 257. Sibth. 207. Albot. 143.*

*S. amphibium* *z. Hudk. 296.*

*Raphanus aquaticus*, foliis in profundas lacinias divis. *Dill. in Rati Syn. 301.*

**GATHERED** in Tothill fields last September. It occurs in several other parts of England, in wet places where the soil is gravelly.

Root annual, tapering, sometimes soon dividing into several branches, but not creeping. Stem about a foot high, nearly erect, branched, leafy, furrowed, smooth. Leaves alternate, lyrate, smooth, unequally toothed or somewhat serrated. Flowers numerous, small. Petals shorter than the calyx, sometimes emarginate, yellow. Calyx-leaves concave, obtuse, tinged with red or brown. Nectary of 4 large green glands between the longer and shorter stamens. Stigma capitate, cloven. Fruit in very long cylindrical clusters; the partial stalks alternate, horizontally spreading, each bearing a shortish, corrugated, swelling pod, which grows more upright as it ripens, and is crowned with a very short style. Seeds several.

Linnæus appears not to have been acquainted with this species. Hudson thought it a variety of *S. amphibium*, which has a perennial root, leaves sharply serrated or pinnatifid, larger petals, smaller pods, and a longer style.

1747



*Scutellaria, Published by J. S. Sowerby, London.*





[ 1810 ]

# SISYMBRIUM *amphibium.*

**Great Water Radish or Radish.**

## TETRASTYLISIA *Sisymb.*

**GERM. CHAR.** *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

**SEED. CHAR.** *Pods* declining, on longish stalks. Leaves oblong, pinnatifid or serrated. Petals longer than the calyx.

**SYN.** *Sisymbrium amphibium.* *Linn. Sp. Pl.* 917.

*Sm. Fl. Brit.* 702. *Habk.* 296  $\beta$  and  $\gamma$ . *With.* 581.

*Hall.* 150. *Roll.* 257. *Sisch.* 207. *Abbot.* 143.

*Radícula sphaerocis, sem palustris.* *Ram. Syn.* 301.

**NOT** rare in watery places, especially in rivers and ditches, where it grows to a great size, with long floating stems, throwing out abundance of fibrous roots, and bearing deeply pectinated leaves under water. Sometimes it grows on the neighbouring banks and dry ground, in a smaller form, with broader leaves, which are only serrated, not pinnatifid. The roots themselves are not of the creeping kind. They are perennial, long and perpendicular. The leaves are, as above hinted, very various in form, but more or less oblong, clasping the stem with their dilated base; the radical ones on footstalks. Flowers yellow, their petals always longer than the calyx. Germen globular, stalked. Style elongated. The fruit-stalks are longish and slender, spreading horizontally, and the pods, which are short and small, point upwards. They are often abortive. The flowers abound throughout July and August.

Hudson confounded this very distinct species with *S. terrestre*; see t. 1747.

1840



*Jan. 3. 1840. Published by J. & J. Sowerby, London.*

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## SISYMBRIUM tenuifolium.

*Wall Rocket.*

TETRADYNAMIA Siliquosa.

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. Leaves smooth, nearly entire; the lowermost once or twice pinnatifid; the uppermost undivided.

SYN. *Sisymbrium tenuifolium*. Linn. *Sp. Pl.* 917.

*Brassica muralis*. Hudf. 290. *With.* 592. *Curt.* Lond. fasc. 3. t. 38.

*Eruca sylvestris*. Raii *Syn.* 296.

THIS plant has been known to English botanists by many different names, yet no one has hit on the right synonym of Linnæus. Mr. Hudson at first took it for his *Brassica Erucastrum*, misled perhaps by the quotation of Fuchsius, p. 262, which probably belongs to our plant; but having found his error, yet still thinking it a *Brassica*, in his 2d edition he called it *B. muralis*, falling into a fresh mistake in quoting the *Sisymbrium murale* of Linnæus as a synonym, which is very different, as may be seen in Dickson's Dried Plants, No. 12, and *Barrel. Ic.* t. 131. Linnæus adopted his *S. tenuifolium* from Dalibard, without seeing a specimen, nor is it, as such, in his herbarium; I was therefore obliged to learn in France what he intended: yet as the synonyms he quotes are all right, it might have been determined by them, with the help of his specific character, which, though not faultless, can hardly be mistaken. We follow Linnæus in this instance, as the spreading calyx makes it a *Sisymbrium*, not a *Brassica*, so that there is no occasion to recur to the uncertain mark of the nectariferous glands. The name *tenuifolium*, taken from J. Bauhin, is certainly exceptionable, some of the genus having much more finely cut leaves.

This *Sisymbrium* grows on the walls of many old towns, and is perennial, flowering all the summer. The stem is round, branched, leafy, smooth, with a few scattered hairs. Leaves alternate, glaucous, rather fleshy, for the most part simply pinnatifid, but some of them are frequently bipinnatifid; the uppermost generally, not always, simple. The margins of all are entire, sometimes slightly notched. The elegant straw-coloured flowers smell unpleasantly, and every part is pungent to the taste.

Linnæus latterly confounded this with his *S. catholicum*, which has sharply-ferrated leaves, and is a smaller more delicate plant.







[ 1090 ]

## SISYMBRIUM murale.

*Sand Rocket.*

TETRADYNAMIA Siliquefa.

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. *Pods* erect. *Leaves* lanceolate, deeply ferrated. *Stem* spreading, roughish.

SYN. *Sisymbrium murale.* *Linn. Sp. Pl.* 918. *Wilden. v. 3.* 496. *Dicks. Dr. Pl.* 12.

FOR this new addition to the catalogue of British plants we are obliged to Mr. Dillwyn, who found it in 1801, growing plentifully throughout the Isle of Thanet, particularly about Ramsgate. It thrives well on barren sand and rubbish, but in richer or moister places becomes so much more luxuriant as scarcely to be known: in its most starved state only it answers to the Linnæan character *subacaule*. It flowers throughout the autumn, and ripens seed in great plenty.

Having for many years observed this species in a garden, we can speak with certainty to its distinguishing characters. The root is truly annual, in which it differs from *S. tenuifolium* and *monense*. Stems branching, but often very short, leafy, round, more or less rough with deflexed hairs. Leaves of a broad lanceolate figure, tapering at the base into a long foot-stalk; their margin deeply and irregularly ferrated, but not pinnatifid; their colour lightish green, not glaucous. Long racemose stalks terminate the stem and branches, bearing several yellow flowers, which are smaller and rather paler than those of the two species above mentioned. The pods are long, slender, and erect. Some hairs are often found on the general and partial flower-stalks, and (more sparingly) on the leaves.

We presume this plant may have been overlooked as a variety of *S. tenuifolium*, see *t.* 525, but they are without doubt quite distinct.





Nov. 1 1802 Published by Jas. Sowerby London.

## SISYMBRIUM monense.

*Dwarf Sea Rocket.**TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. Pods nearly upright. Leaves pinnatifid, slightly hairy. Stems simple, almost naked, smooth.

SYN. *Sisymbrium monense*. *Linn. Sp. Pl. ed.* 1. 658.  
*Sm. Fl. Brit.* 704. *Lightf.* 353. *t.* 15. *f.* 1.  
*Dickf. H. Sicc. fasc.* 17. 13.

*Brassica monensis*. *Hudf.* 291. *With.* 593. *Hull.* 148.

*Eruca monensis laciniata lutea*. *Raii Syn.* 297.

THIS species of *Sisymbrium* is scarcely to be found except on the shores of Anglesea, Man, Cumberland and the west of Scotland. Our wild specimen was gathered on the isle of Walney by W. Hustler, Esq. in June 1801.

The root is perennial and strong. Stems several, 6 or 8 inches high, spreading, unbranched, round, smooth, for the most part destitute of leaves, except about the bottom. Leaves many, on longish stalks, rather fleshy and inclining to a glaucous hue, pinnatifid; their lobes narrowish, distant, entire or toothed, furnished occasionally here and there with a few bristly hairs. Flowers corymbose, large. Calyx tipped with hairs, its leaves but little expanded. Petals lemon-coloured, veined with purple. Pods loosely spreading, not quite erect, beaked, obscurely square, smooth.—In a garden the stems become taller and leafy, sometimes branched.

The specimen from Provence, sent by Gerard, which Linnaeus had before him when writing the second edition of *Species Plantarum*, we suspect (as he did) to be a distinct species, having smaller flowers, less evidently veined, and differing in its general aspect. We therefore quote the first edition of that work, in which this species was merely adopted from Dillenius, who unquestionably described our plant.



*Brassicaceae* (Cruciferae) *Brassica* sp.







[ 963 ]

## SISYMBRIUM Sophia.

*Flix-weed.*TETRADYNAMIA *Siliquosa.*

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. Leaves doubly pinnate, a little hairy. Petals smaller than the calyx.

SYN. *Sisymbrium Sophia.* *Linn. Sp. Pl.* 920. *Sm. Fl. Brit.* 704. *Huds.* 297. *With.* 582. *Hull.* 150. *Relb.* 258. *Sibth.* 208. *Abbot.* 143. *Mart. Rusf. t.* 57.

*Erysimum Sophia dictum.* *Raii Syn.* 298.

**F**REQUENT about rubbish, waste ground, and dunghills, flowering in July and later.

Root annual, small, tapering. Stem about 2 feet high, erect, branched, round, very leafy. Leaves alternate, spreading, doubly pinnate, or perhaps more properly pinnatifid, for the principal and partial divisions are all confluent; the ultimate segments are lanceolate, acute, entire, more or less evidently hairy; the terminal ones largest. Flowers very small, pale-yellow, the minute petals almost hidden by the calyx, which has nearly as much colour as themselves. The corymbus soon grows out into a very long spike of numerous slender pods, which stand erect on spreading stalks. Seeds many, small and reddish.

Few plants have less pretensions to beauty, though the feathery segments of the leaves are not devoid of symmetry.

The old name *Flix-weed* arose from the quality attributed to this plant of curing immoderate laxity of the bowels.



*Desmodium illinoense* (Mill.) Benth.

SISYMBRIUM Irio.

*London Rocket.*

*TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. Leaves runcinate, toothed, naked. Stem smooth. Pods erect.

SYN. *Sisymbrium Irio.* *Linn. Sp. Pl.* 921. *Sm. Fl. Brit.* 705. *Huds.* 297. *With.* 583. *Hull.* 150. *Relh.* 258. *Sibth.* 207. *Curt. Lond. fasc.* 5, t. 48. *Jacq. Austr. t.* 322.

*Erysimum latifolium neapolitanum.* *Raii Syn.* 298.

THIS species of *Sisymbrium* is chiefly known in waste ground about London near the Thames. In Chelsea garden, and all that neighbourhood, it is a troublesome weed. The root is annual, the flowers are produced from May to August, and the seeds ripened during most of that period in great profusion. After the fire of London it is said to have been peculiarly abundant; whence some botanists of that time, not being able to trace its origin, deduced an argument in favour of spontaneous generation: an argument as unnecessary to be refuted now, as some opinions concerning sky-fallen stones may be a century hence.

The herbage of this plant is generally quite smooth, yet not so completely as Mr. Curtis mentions, for the upper part of the stem is often downy, and the calyx hairy. Stem about 2 feet high, branched, round. Leaves alternate, pinnatifid; the lobes recurved, toothed chiefly at the upper edges. Flowers small, yellow. Pods numerous, long, slender, rugged when ripe. Taste of every part like mustard.

I beg leave here to mention that my worthy friend Dr. Gray of the British Museum has very properly reminded me of his having many years ago shown me specimens of *S. murale*, which, at p. 1090 of this work, is mentioned as a more recent discovery. We then judged it a variety of *S. tenuifolium*, and it escaped my recollection. Other botanists, indeed, have shown me real varieties of *tenuifolium* for *murale*.





7





## E R Y S I M U M officinale.

*Common Hedge-mustard.**TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Pod* straight, columnar, exactly square.  
*Cal.* closed. *Stigma* blunt.

SPEC. CHAR. Pods close-pressed to the main stalk.  
 Leaves runcinate.

SYN. *Erysimum officinale.* *Linn. Sp. Pl.* 922. *Sm. Fl. Brit.* 706. *Huds.* 286. *With.* 583. *Hull.* 146. *Relb.* 250. *Sibth.* 201. *Abbot.* 144. *Curt. Lond. fasc.* 5. t. 50. *Woodv. Suppl. t.* 244.

*Eruca hirsuta*, filiquâ cauli appressâ, *Erysimum dicta.*  
*Raii Syn.* 298.

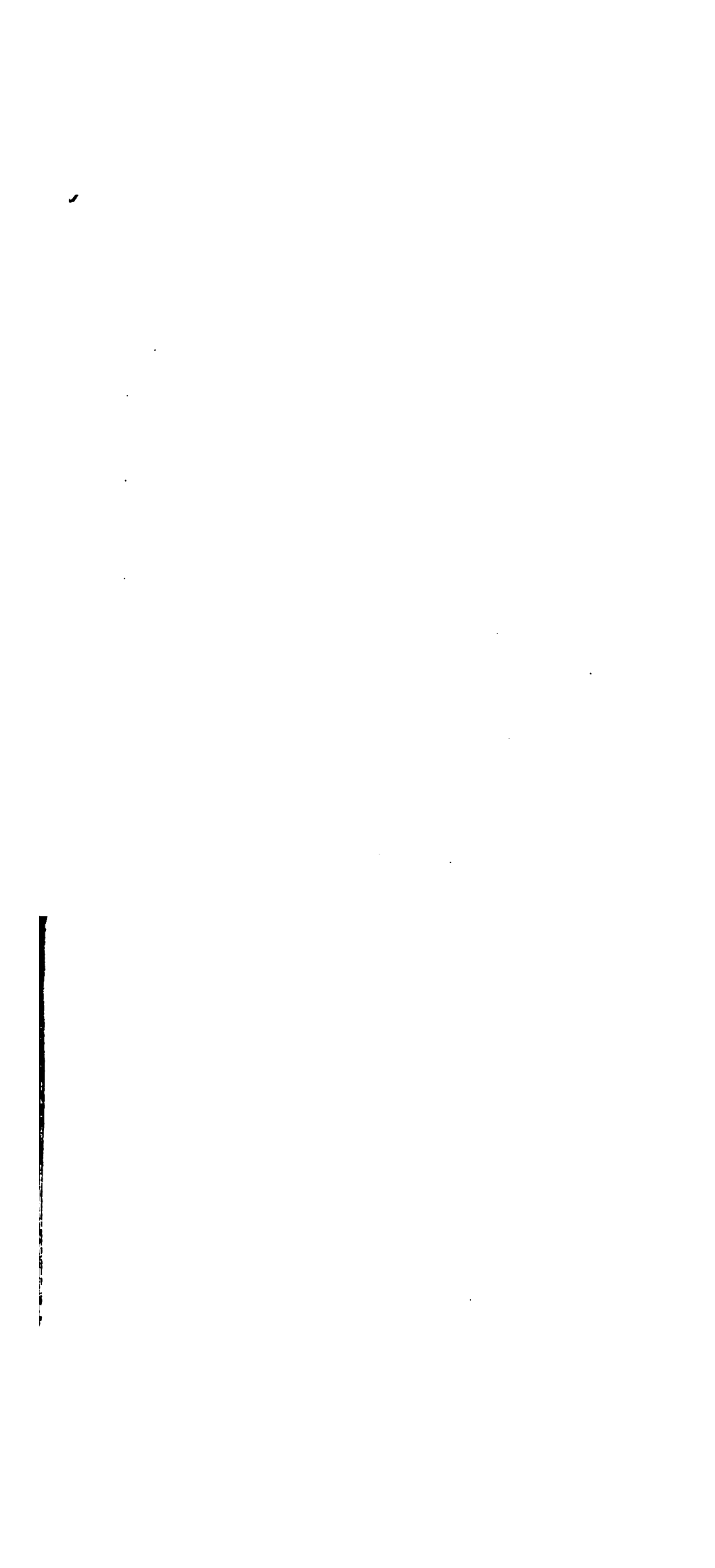
NO plant can be more common, nor hardly any less attractive, than the Hedge-mustard; and if we should be led by the name *officinale* to expect any latent medical virtues, we should be scarcely less disappointed than in its external charms; for, whatever stimulant properties it may possess, they are certainly much weaker than those of the *Sinapis* and many others of this natural order, nor does it appear to have any other qualities which they do not possess.

*E. officinale* is an annual, flowering in June and July, and to be found in waste ground, on hedge banks, and similar situations, where its long spreading branches, set with numerous close-pressed seed-pods, and terminating in a little dense cluster of lemon-coloured flowers, make it easily known. The whole plant is rather hairy. Leaves lyrate, their lobes *runcinate* or hooked backwards, unequally toothed. Their colour is a dull hoary green.

735



Aug. 1. 1800. Published by J. Smith, London.





## E R Y S I M U M Barbarea.

*Yellow Rocket.*TETRADYNAMIA *Siliquosa.*GEN. CHAR. *Pod* columnar, exactly square. *Cal.* closed. *Stigma* blunt.

SPEC. CHAR. Lower leaves lyrate, the terminal lobe roundish; upper ones obovate, dentate.

SYN. *Erysimum Barbarea.* *Linn. Sp. Pl.* 922. *Huds.* 286. *With.* 584. *Relb.* 250. *Sibth.* 202.*Eruca lutea*, seu *Barbarea.* *Raii Syn.* 297.

**F**REQUENT every where about hedges, waste ground, and the banks of rivers, flowering from May to the end of summer.

Root perennial, tapering. Stem 2 or 3 feet high, simple or branched, erect, strong, angular and furrowed, smooth. Radical and lower stem-leaves lyrate; the upper ones gradually becoming less divided, and at length obovate; all are alternate, of a deep shining green, strongly veined, smooth, dentate, and are extended on each side at the base so as to clasp the stem. Flowers in terminal corymbi, soon lengthened out into spikes, numerous, yellow, the calyx also being partly coloured. When double, they continue long in beauty, and are introduced into gardens. There are two glands on the outside of the longer stamina, and two under the shorter ones. The *Pod* is quadrangular, though less sharply so than in some other species.

The taste of this herb, though ever so young, is bitterish, slimy, and very nauseous: yet Linnæus, in *Flo. Suec.* says it is used as a spring salad. What his variety  $\beta$  may be, (the *Barbarea foliis minoribus & frequentius sinuatis* of Dillenius in Ray's Synopsis,) we are not certain, neither does Dr. Withering appear to have seen it. Linnæus however, in a manuscript note, says it is insipid and void of acrimony, and that the leaves are not lyrate, but the radical ones entire, and cordato-ovate. This variety therefore can scarcely be the American Winter Salad, or Winter Cress of the gardens, which tastes pleasantly and warm like water-cresses, and which we suspect to have been generally confounded with *Erysimum Barbarea*. Tradition says it was introduced a few years ago from America. We have found it apparently wild in a lane near Leeds, and have been inclined to add it to the British Flora. It is a true *Erysimum*, having a quadrangular pod, calyx-leaves cohering, much broader than those of *Barbarea*, from which it also essentially differs in having all its upper leaves pinnatifid, with oblong, almost linear, obtuse and entire segments, not to mention the wide difference in flavour.



From 1798 published by J. D. Smith







**ERYSIMUM** *præcox.*  
*Early Winter Cress.*

**TETRADYNAMIA** *Siliquosa.*

**GEN. CHAR.** *Pod* columnar, exactly square. *Cal.* closed. *Stigma* capitate.

**SPEC. CHAR.** Lower leaves lyrate; upper ones pinnatifid, their segments linear-oblong and entire.

**SYN.** *Erysimum præcox.* *Sm. Fl. Brit.* 707.

*E. Barbarea*  $\beta$ . *Linn. Sp. Pl.* 922?

*Barbarea foliis minoribus et frequentius sinuatis.*

*Dill. in Raii Syn.* 297.

*Early Winter Cress.* *Petiv. H. Brit. t.* 46. *f.* 2.

**W**E are obliged to the Rev. Dr. Beeke for wild specimens of this plant, gathered on a hill half a mile north of Teignmouth, as well as near Dawlish, Kingsteington, and Honiton, Devonshire, the soil a red brick clay. It begins to flower in May, and may be found till autumn.

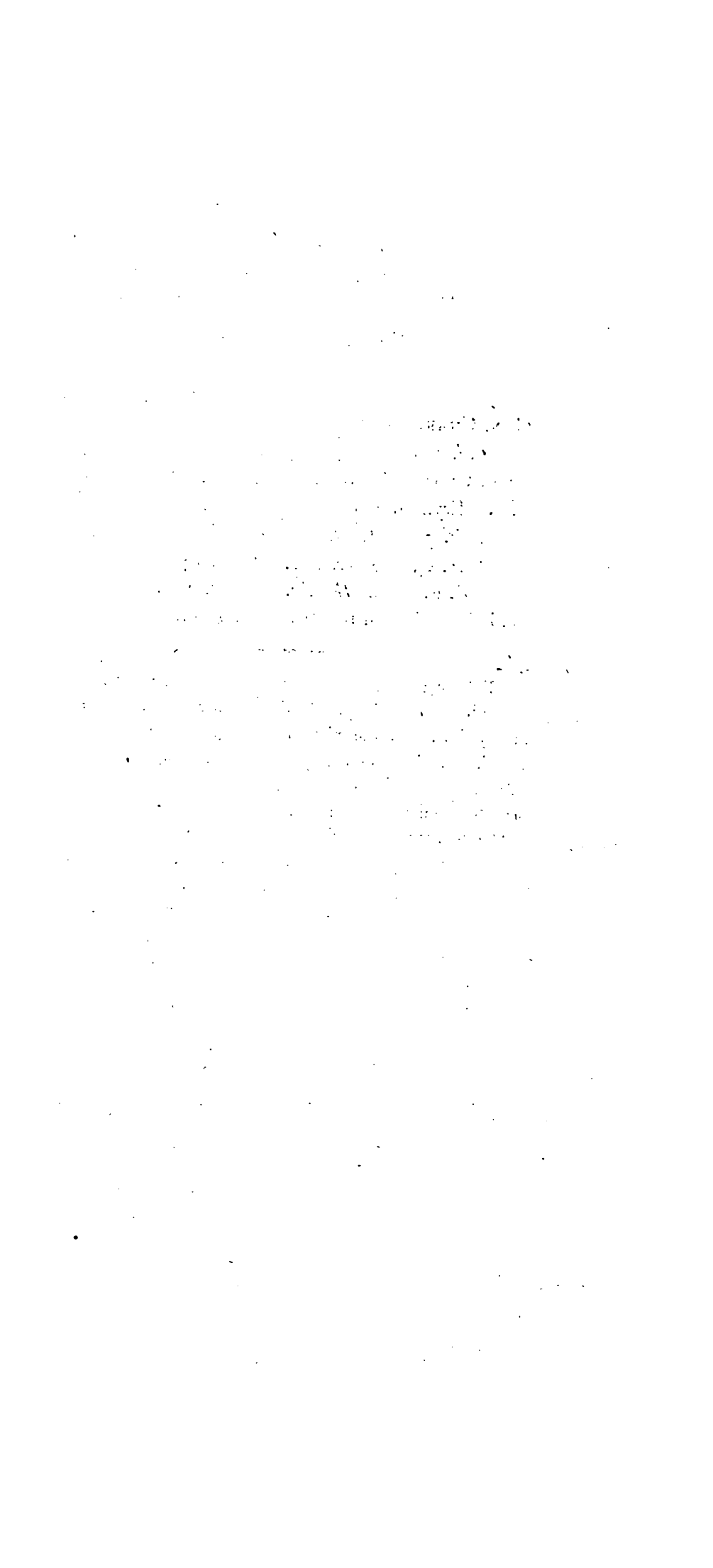
The root appears to be perennial. Stem about 18 inches, in moist situations 2 feet, high, erect, leafy, angular, smooth, a little branched, purplish below. Radical leaves very numerous, exactly like those of *Sisymbrium Nasturtium*, lyrate, their stalk a little hairy: stem leaves oppositely, deeply and regularly pinnatifid, their lobes oblong, bluntish, entire, smooth and shining, the lowermost rounded, clasping the stem, fringed. Flowers smaller and paler than those of *E. Barbarea*, *t.* 443. Pods nearly thrice as long as in that species, exactly square, smooth, crowned with a very short permanent style.

There can be no doubt of this being what Petiver intended in the figure above quoted, and consequently what Dillenius has introduced into Ray's *Synopsis*. We doubt whether any following botanist has been acquainted with it till now. It is distinct enough from *E. Barbarea*. Dr. Beeke thinks it also different from the Winter Cress of the gardens called American Cress, but we are at a loss for a specific difference between them.



Feb 1 1803 Published by J. Sowerby London





## E R Y S I M U M Alliaria.

*Garlick Hedge-mustard.**TETRADYNAMIA Siliquosa.***GEN. CHAR.** *Pod* straight, columnar, exactly square.*Cal.* closed. *Stigma* blunt.**SPEC. CHAR.** Leaves heart-shaped.**SYN.** *Erysimum Alliaria.* *Linn. Sp. Pl.* 922. *Sm. Fl.**Brit.* 708. *Huds.* 286. *With.* 584. *Hull.* 146.*Relb.* 251. *Sibth.* 201. *Abbot.* 144. *Curt. Lond.**fasc.* 2. t. 48. *Woodv. Suppl. t.* 245.*Hesperis Allium redolens.* *Raii Syn.* 293.

**V**ERY common under hedges and in other shady places, where it flowers in May. As the summer advances the leaves turn yellow, and the plant soon dies, sowing its seeds in abundance. The young plants which spring up from them in autumn generally flower the next season, so that the root is more properly annual than biennial.

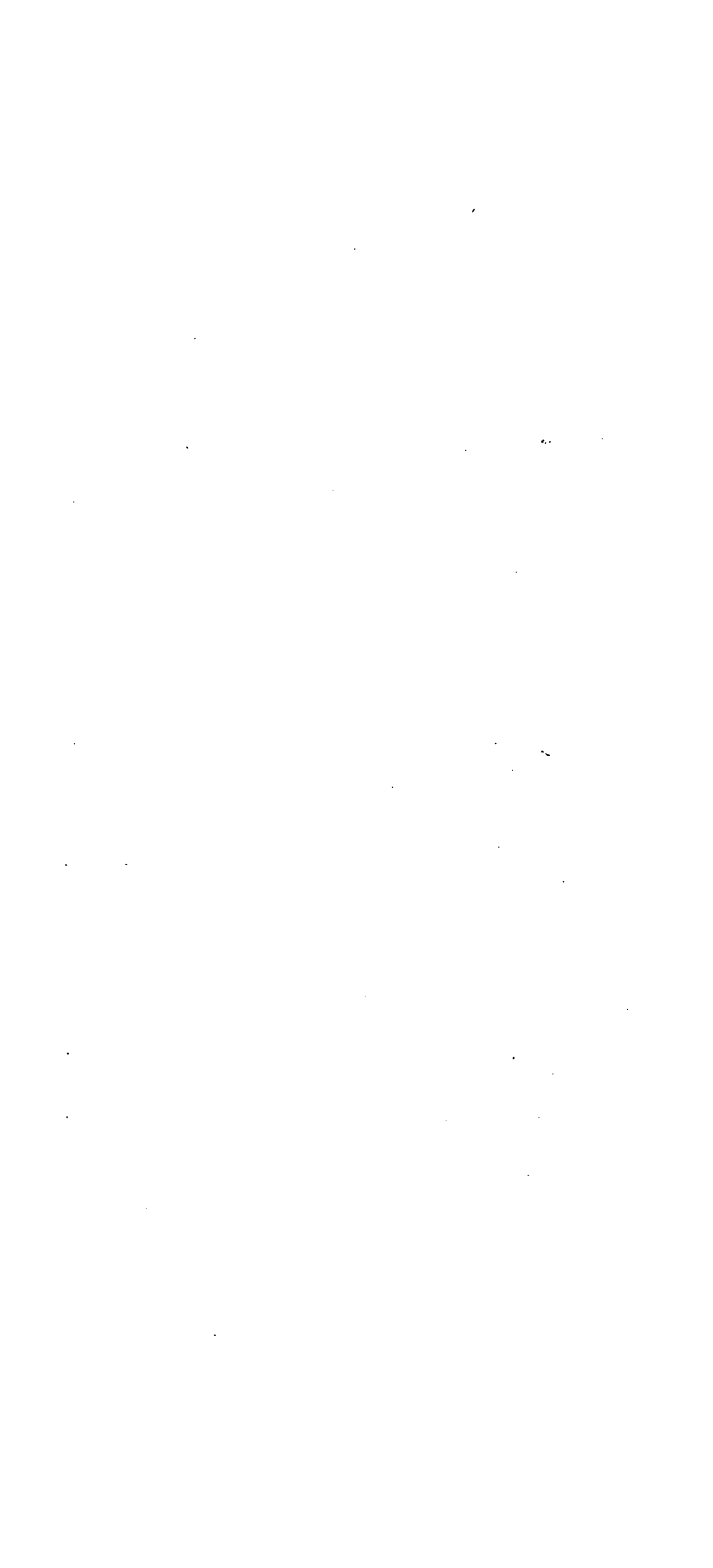
The stem is upright, about a foot or more in height, leafy, a little branched in the upper part. Leaves alternate, on foot-stalks, heart-shaped, broad, toothed, veiny, of a deep shining green, and very smooth. Flowers small, with white entire petals, and the calyx also is whitish at the base. A notched gland embraces the base of each of the shorter stamina, and a smaller entire one stands without side of the longer stamina. Pods erect, long, quadrangular, which last is the most certain character of *Erysimum*, and obliges us to overlook the calyx, whose leaves do not stand so close together as the generic description requires.

When bruised this whole herb has a strong smell, which seems as it were the quintessence of the peculiar acrid flavour common to the cruciform plants, heightened into that of garlic. Hence it has acquired the name of *Sauce alone*, and Ray tells us the country people eat it with bread and butter. It is certainly the cheapest article of the three.



*Brassica oleracea* L. var. *capitata* L.







## ERYSIMUM cheiranthoides.

*Treacle Hedge-mustard.**TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Pod* straight, columnar, exactly square.  
*Cal.* closed. *Stigma* blunt.

SPEC. CHAR. Leaves lanceolate, slightly toothed.  
 Pods erect. Flower-stalks when in fruit spreading.

SYN. *Erysimum cheiranthoides.* *Linn. Sp. Pl.* 923.  
*Sm. Fl. Brit.* 708. *Hudf.* 287. *Witb.* 585.  
*Hull.* 146. *Relb.* 251. *Sibth.* 202.

*Cheiranthus erysimoides.* *Hudf.* 287.

*Myagro affinis planta, filiquis longis.* *Raii Syn.* 298.

THE plant here delineated is to be found in other grounds in various parts of England, nor is it of so rare occurrence as we at one time supposed, being not uncommon in turnip-fields in Norfolk and Suffolk, in which counties it sometimes occurs as a weed in gardens. Our wild specimen came from Norwich. It is an annual, flowering about July.

The stem is erect, varying greatly in size, as well as number of branches, according to the richness of the soil, straight, leafy, angular, covered with small close-pressed bristles. Leaves lanceolate, either quite entire, or furnished with a few distant teeth, roughish, with small, depressed, whitish, often forked or three-cleft, bristles, which are also found on the stalks and pods. Flowers numerous, small, yellow, with a yellowish erect calyx. The partial flower-stalks become horizontal as the fruit increases, but the pods themselves stand erect, and are square, tipped with a minute sessile stigma.

Mr. Hudson first adopted this plant from Ray, and was led by Bauhin's synonym to refer it, rightly, to the *E. cheiranthoides* of Linnæus. When he himself gathered what we know, by authentic specimens, to be the same, he erroneously took it for *Cheiranthus erysimoides*, and thus in his 2d edition has one plant under two names.—The English name arose from its entering into that nonsensical hodge-podge called *Tberiaca* or Venice Treacle.



Oct. 1. 1801. Engraved by J. J. Sowerby, London.





[ 1934 ]

## CHEIRANTHUS fruticosus.

*Wild Wall-flower.**TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Germen* with a glandular tooth on each side. *Calyx* closed; 2 of its leaves gibbous at the base. *Seeds* flat.

SPEC. CHAR. Leaves lanceolate, acute, hoary beneath. Pubescence all simple and close-pressed. Stem somewhat shrubby. Branches angular.

SYN. *Cheiranthus fruticosus*. *Linn. Mant.* 94. *Sm. Fl. Brit.* 709. *Galp.* 56. *Relh.* 260.

*C. Cheiri*. *Huds.* 287. *With.* 586. *Hull.* 146. *Sibth.* 202. *Abbot.* 144.

*Leucojum luteum*, vulgò *Cheiri*, flore simplici. *Raii Syn.* 291.

ABUNDANT on the old ruined walls of cities, castles and monasteries throughout Britain, where its bright golden flowers are very ornamental and fragrant in April and May.

The roots and stems are perennial and somewhat woody; the branches copious, tufted, erect, leafy, angular, a little hoary, each terminating in a corymbose simple cluster of flowers. Leaves crowded, stalked, lanceolate, acute, for the most part entire except some of the lowermost, all green except a slight hoariness, chiefly beneath, caused by numerous, close-pressed, simple hairs. *Calyx* often purplish or brown. Petals of an uniform yellow, not stained with brown as in *C. Cheiri*, neither do they, as in that, hang loosely flaccid, but are rather, as the late Mr. Crowe observed, rigid and slightly recurved. Pods erect, nearly cylindrical, hoary, destitute of a pair of small wings near the top noticed by Mr. J. D. Sowerby in *C. Cheiri*, which, if constant, greatly strengthen the specific difference.

It may be proper to mention that *C. fruticosus* of *Linn. Sp. Pl. ed. 1.* is *C. tristis* of the 2d edition, very different from the above,

1934



*Sept. 1868, published by J. A. Schimper, London.*







[ 1935 ]

## CHEIRANTHUS incanus.

*Hoary Shrubby Stock.**TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Germen* with a glandular tooth on each side. *Calyx* closed; 2 of its leaves gibbous at the base. *Seeds* flat.

SPEC. CHAR. Leaves lanceolate, obtuse, entire, hoary. Pods with a simple obtuse summit. Stem shrubby.

SYN. *Cheiranthus incanus*. *Linn. Sp. Pl.* 924. *Ait. H. Kew. v. 2.* 395. *Mill. Illustr. t.* 55.

*Leucojum album*, &c. *Ger. em.* 458. *f.* 1, 2.

DISCOVERED by Mr. Turner and Mr. W. Borrer in 1806 on the cliffs to the east of Hastings, Sussex, where this specimen was gathered May 27, 1808. It grows on such inaccessible rocky ledges as to be obtainable only by a person let down from the summit with a rope. Such being its natural station on the coast in the south of Europe, we presume it may be wild with us, though best known in gardens, where it is very commonly cultivated. It frequently falls a sacrifice to our winters, in inland situations, without flowering; but sometimes, though usually biennial, it will survive in a languishing state for 3 or 4 years. Possibly on its native cliffs it may be perennial; which would render it more decidedly distinct from the common Ten-week Stock, *Ch. annuus*.

The stem is shrubby, branched, round, leafy, hoary with starry pubescence, as is all the herbage. Leaves lanceolate, obtuse, entire, taper at the base. Flowers in terminal corymbs, fragrant, naturally of a purplish crimson, often double. Petals rounded and nearly entire, their claws pale and greenish. Pods long, cylindrical, hoary; their points a little elongated, but simple and blunt, crowned with the permanent dilated stigma. Seeds numerous.

1935



*Brassica hirsuta* L. in C. Bauh. Pin. 161.



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CHEIRANTHUS *finuatus*.*Sea Stock.*TETRADYNAMIA *Siliquosa.*

GEN. CHAR. *Germen* with a glandular tooth on each side. *Calyx* closed; 2 of its leaves gibbous at the base. *Seeds* flat.

SPEC. CHAR. Leaves downy, blunt, finuated; those on the branches entire. Pods prickly.

SYN. *Cheiranthus finuatus*. *Linn. Sp. Pl.* 926. *Huds.* 288. *With.* 586.

*Leucojum marinum majus.* *Raii Syn.* 291.

THIS fine plant is a native of the sandy sea-shores of Wales and Cornwall; it was sent us from Pembroke by John Adams Esq. F.L.S. flowering in August. It is well worthy of cultivation in a garden, the flowers being very conspicuous and ornamental, and highly fragrant in an evening. It is easily propagated by seed, and the root is biennial.

Whole herb clothed with hoary stellated intricate down. Stem 2 feet high, branching, round, leafy. Leaves a little succulent, alternate, oblong, blunt, with 2 or 3 large indentations on each side; the upper ones however are entire. Flowers in terminal *corymbi* afterwards lengthened out into spikes, of a reddish lilac or purple colour, much resembling those of the garden stock, but not fragrant by day. Calyx compressed, purplish, hoary. Petals with a long white claw. Two of the stamina very short. Stigma with 4 notches. *Germen* very downy. Pods long, of 2 cells, compressed, hoary, and sprinkled with glandular prickles, such as are found more sparingly on the leaves. Seeds numerous, flat, with a membranous border. The whole plant has a strong alkaline bitterish flavour. Mr. Hudson, in his first edition, mistook this for the *C. tricuspoidatus* of Linnæus, a species which much resembles ours, but is remarkable for 3 large projecting points which terminate the pod.





*Verbena officinalis* L.







HESPERIS inodora.

*Scentless Dame's-violet.*

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TETRADYNAMIA *Siliquosa.*

GEN. CHAR. *Petals* obliquely twisted. A *gland* on the inside of the shorter *stamina*. *Pod* straight. *Cal.* closed; 2 of its leaves gibbous at the base.

SPEC. CHAR. Stem erect. Leaves ovato-lanceolate, toothed, sometimes slightly hastate at the base. Petals obtuse.

SYN. *Hesperis inodora.* *Linn. Sp. Pl.* 927. *Sm. Fl. Brit.* 711. *Huds.* 288. *With.* 586. *Hull.* 147. *Jacq. Austr. t.* 347.

*H. sylvestris inodora.* *Dill. in Raii Syn.* 293.

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GATHERED on Cotswould ridge, by the road side between Frogmill and Cheltenham, Gloucestershire, by Lord Viscount Lewisham. This should therefore be the *H. inodora* of Hudson and Withering, as it is unquestionably that of the Linnæan herbarium, communicated by Jacquin to Linnæus under the name of *Hesperis tertia Clusii*. How far it is really distinct from the garden *H. matronalis* is by no means certain; for that is altogether without smell in the day-time, and Clusius says they are hardly to be distinguished by any other character. Both flower in May and June, and are generally biennial in fact, though naturally perennial; that is, they are capable, if circumstances are favourable, of flowering for several successive years. The plant before us rises to the height of 2 feet or more, with a round, slightly-branched, stem. Leaves alternate, unequally toothed, inasmuch that the larger teeth near the base sometimes give them a kind of hastate figure; but this rarely happens. The pubescence of the whole herb is either simple or forked. Flowers pale rose-coloured. Calyx-leaves cohering by their upper part. Stigma arrow-shaped, at least as the pod increases; but this circumstance is not proper to the whole genus.



*Barbarea Bellidifolia* (P. Bellidifolia) L.

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## ARABIS thaliana.

*Common Wall-Cress.*

## TETRADYNAMIA Siliquosa.

GEN. CHAR. *Nectariferous glands* 4, oblong, scale-like, reflexed. *Cal.* closed; two of its leaves gibbous at the base. *Stigma* simple. *Pod* linear, rugose.

SPEC. CHAR. Leaves hairy, more or less toothed; the radical ones on footstalks. Stem branched. Pods pointing upwards.

SYN. *Arabis thaliana*. *Linn. Sp. Pl.* 929. *Sm. Fl. Brit.* 712. *Huds.* 292. *With.* 587. *Hull.* 147. *Relb.* 254. *Sibth.* 205. *Abbot.* 145. *Curt. Lond. fasc.* 2. t. 49. *Dickf. H. Sicc. fasc.* 17. 12.

*Turritis vulgaris ramosa.* *Raii Syn.* 294.

COMMON on walls, roofs, and dry gravelly places, flowering in April.

Root annual, tapering, fibrous. Stem solitary, upright, from 2 to 10 inches high, branched, leafy, round, hairy about the base. Leaves lanceolate, hairy, unequally toothed or serrated, sometimes entire, especially when the plant is starved and diminutive; the radical ones lying close to the ground; the rest alternate, and smaller. Flowers corymbose, on slender stalks, small, white. Calyx bristly upwards. Petals erect. Nectariferous glands minute, like little curved scales at the base of the stamina, but not projecting between the calyx-leaves, nor do they seem to us constant or conspicuous enough in this or any other *Arabis* to make a generic character. The pods stand nearly erect on spreading stalks, and are linear, a little rugged, but destitute of hairiness.

The whole plant partakes of the pungent flavour of its class, but is not remarkable for any peculiar quality. After scattering its seeds in May it soon withers and disappears.





7





## ARABIS stricta.

*Bristol Rock-Cress.*

## TETRADYNAMIA Siliquosa.

GEN. CHAR. *Nectariferous glands* 4, oblong, reflexed.  
*Cal.* closed; two of its leaves gibbous at the base.  
*Stigma* simple. *Pod* linear, rugose.

SPEC. CHAR. Leaves dentate, obtuse, rough; the radical ones somewhat lyrate. Stems rough. Petals erect.

SYN. *Arabis stricta*. *Huds.* 292. *With.* 587. *Velley Pl. Marit.* t. 5. *Sbiercliff's Bristol Guide*, 83, tab.

*Turritis Raii.* *Villars. Dauph. vol.* 3. 326. t. 38.

*Cardamine pumila, bellidis folio, alpina. Raii Syn. ed.* 2. 172. *ed.* 3. 300 ?

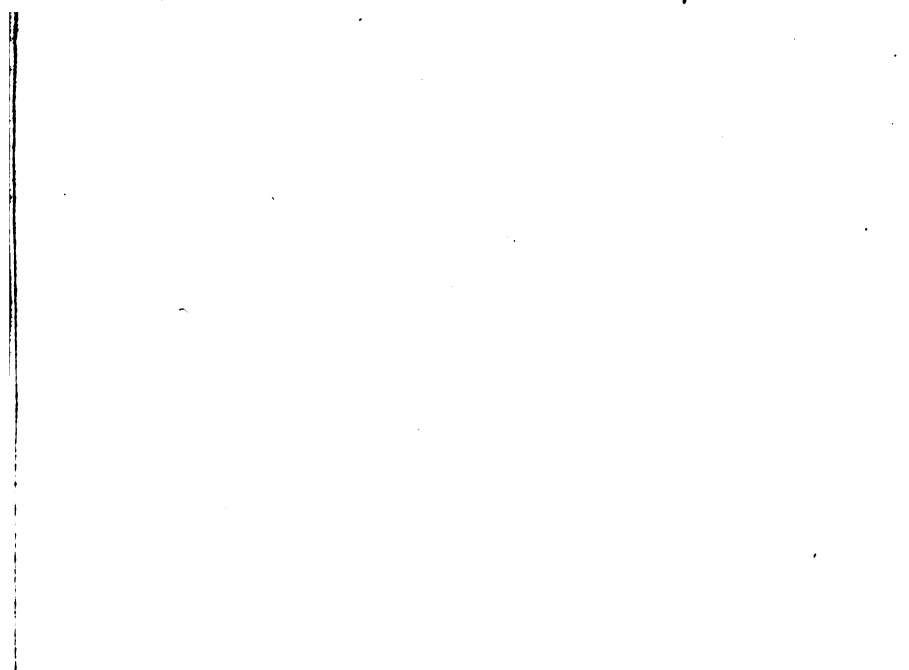
FEW of our plants are so local as this. It is not certainly known to grow in any other part of Britain than on St. Vincent's rocks near Bristol, where it was pointed out to me, flowering in May 1799, by Mr. W. Clayfield and Mr. Dyer. It is principally to be met with about a mile below the Hot-wells, on the opposite side of the river, growing on the more inaccessible parts of the rock, and there but in small quantity.

The root is certainly perennial, as the withered stem on our specimen testifies. Stems generally more than one, sometimes numerous; erect, round, a little branched, leafy, hairy below. Radical leaves many, dentated in a lyrate manner, blunt, rough with simple (rarely forked) hairs; stem-leaves alternate, more entire; all the leaves are of a deep shining green, often purplish beneath. Flowers few, in upright *corymbi*, cream-coloured. Calyx smooth, very little spreading, generally quite closed. Petals twice as long as the calyx, obtuse, erect, by which this species is readily distinguished. Pods erect, straight, compressed, very slightly rugose. Seeds many.

We venture to quote, with a mark of doubt, the synonym of Ray which has always been quoted for *Cardamine bellidisfolia*, to which it certainly does not belong, and which is now acknowledged not to grow at Bristol. It is not improbable our *A. stricta* may be the plant which Mr. Newton found, and that he or Ray erroneously referred to it the synonyms of Clusius and Gerarde by which it is distinguished in the Synopsis. These synonyms, however, belong neither to it nor to *C. bellidisfolia*. What Merret had from Bath and Rippon cannot be determined.

61.







ARABIS Turrita.

*Tower Wall-Cress.*

*TETRADYNAMIA siliquosa.*

**GEN. CHAR.** *Neclariferous* glands four, each reflexed like a scale between the calyx leaves.

**SPEC. CHAR.** Leaves embracing the stem. Pods bent backwards, flat and linear, with an incrassated margin.

**SYN.** *Arabis Turrita.* *Lam. Sp. Pl.* 930. *Huds. Fl. An.* 293. *Web. Bot. Arr.* 703. *Rehb. Cant.* 255.

**FOUND** hitherto only on the walls of Trinity and St. John's College, Cambridge, where it was first observed by the late Professor Martyn, and from whence the Rev. Mr. Sutton favoured us with specimens.

We do not pretend to answer for the generic character of this plant, which but ill accords with that of *Arabis*, to which genus it seems to have been referred chiefly from its habit. The glands are in fact 2 within the shorter stamina, and 2 without the longer, "as in *Brassica*" (*Martyn*). Much has been said and written about the insufficiency of these glands to discriminate the genera of this order; but as we have not yet found any fixed principles upon which to reform the whole tribe, we are obliged to take things as Linnæus has left them.

The root is woody, and biennial, according to Mr. Relhan. Stems full a foot high, simple, upright. Leaves pale green, dentated, roughish; the radical ones ovate, lengthened out at their base; those on the stem embracing it more than half round. Flowers pale sulphur-coloured, in a leafy spike. Pods very long, linear, flat, at first erect, then divaricated and pendent. Their edge is thicker than in *A. pendula*, which Haller says is the same species. We do not find the calyx at all rugose. The flowers appear in May.



*f. Linn. del. H. 1794*

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TURRITIS glabra.

*Smooth Tower-Mustard.*

TETRADYNAMJA *Siliquesa.*

CHAR. Pod very long, straight, somewhat angu-  
Cal. closed, erect. Cor. erect.

CHAR. Radical leaves broadly toothed, rough; the rest  
entire, embracing the stem, smooth.

SYN. Turritis glabra. *Sm. Sp. Pl.* 930. *Sm. Fl.*

*Brit.* 715. *Huds.* 1. *With.* 588. *Hull.* 148.

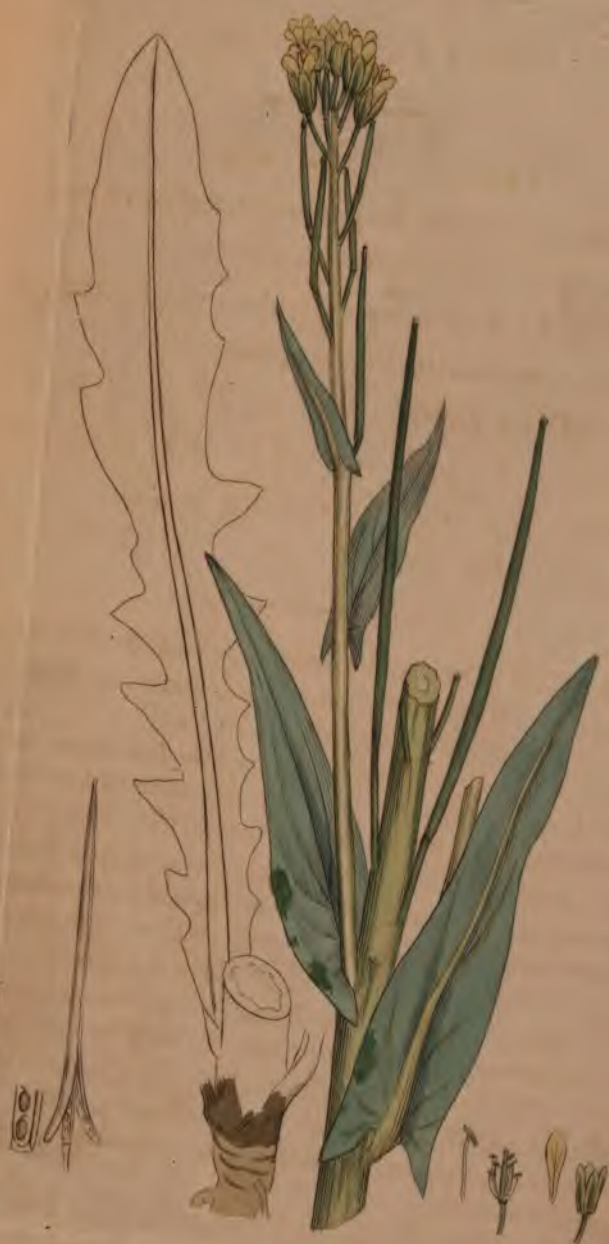
*Sibth.* 204. *Curt. Lond. fasc.* 4. t. 47.

Turritis. *Raii Syn.* 293.

GATHERED by A. B. Lambert Esq. and Mr. Groult near  
Richmond. It loves a dry gravelly soil, and occurs in various  
parts of Norfolk, flowering in May and June.

This is a much taller plant than the *T. birsuta* figured in our  
9th vol. t. 587. The root is annual. The straight wand-like  
stem is two feet or more in height, round, leafy, at first simple,  
but it produces a few lateral upright flowering-branches after  
the main spike of seeds is full grown. Radical leaves lanceolate,  
broadly toothed and almost sinuated, rough on both sides with  
rigid, forked or simple, hairs: stem-leaves numerous, alter-  
nate, sessile, upright, arrow-shaped, entire, smooth, glaucous  
(as is the whole herb more or less), clasping the stem at their  
base. Flowers numerous, small, in a corymbus which soon  
becomes a spike. Petals pale sulphur-coloured, entire. Pods  
long, linear, flat, bursting at their base, and containing a great  
number of seeds.

The genus of *Turritis*, as I have ventured to hint in the  
*Flora Britannica*, is scarcely to be distinguished from *Arabis*  
either by its natural habit or technical characters.







## TURRITIS hirsuta,

*Hairy Tower-Mustard.*

## TETRADYNAMIA Siliquosa.

**GEN. CHAR.** *Pod* very long, straight, somewhat angular. *Cal.* closed, erect. *Cor.* erect.

**SPEC. CHAR.** Leaves all rough. Stem hairy, the hairs simple and spreading. *Pod* quadrangular.

**SYN.** *Turritis hirsuta.* *Linn. Sp. Pl.* 930. *Huds.* 291. *Witb.* 589. *Relb.* 254. *Sibth.* 204. *Dicks. H. Succ. fasc.* 9. 8.

*T. muralis minor.* *Raii Syn.* 294.

**SENT** from near Bury by W. Matthew, Esq; and by Lord Visc. Lewisham from an old wall at the foot of St. Vincent's rocks, Bristol. It has been found in several other parts of Great Britain, but is by no means common. It flowers in May.

Root strong, woody, and perennial. Stems generally several, one of which is much stronger than the rest, erect, a foot high, leafy, branched, round, clothed with thick-set, simple, prominent hairs; the upper part and flowering branches are smooth. Leaves toothed, all more or less hairy; the radical ones slender at the base; those on the stem sessile, or partly embracing it. Flowers small, white. Pods numerous, forming a very long spike, erect, narrow, linear, compressed, but with 4 angles, smooth and somewhat shining, beaded as it were by the projecting seeds, rather blunt at the top, and crowned with the almost sessile stigma.

Linnaeus originally confounded with this, not only *Turritis alpina* of his *Syst. Veg.* which has all the leaves (as far as I can discover) smooth, but also *T. hirsuta* of Gerard's *Flora Galloprovincialis*, which has perfectly flat pods without any lateral angles, and the hairs on its stem depressed and forked, as are all those on its leaves; which in the proper *T. hirsuta* are for the most part simple. I would not however lay too much stress on this circumstance, as in the genus of *Hedynois* it is proved to be fallacious. This last mentioned *Turritis* flowers a month earlier. I received it from Switzerland by means of my much lamented friend Mr. Davall,









[ 1746 ]

## TURRITIS alpina.

*Alpine Tower-Mustard.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pod* very long, straight, somewhat angular. *Cal.* closed, erect. *Cor.* erect.

SPEC. CHAR. Leaves somewhat toothed, smooth, distantly fringed and bearded; the radical ones obovate; the rest elliptical, half-embracing the stem.

SYN. *Turritis alpina.* *Linn. Syst. Veg. ed. 13.* 502.

*T. hirsutæ* varietas. *Fl. Suec.* 236.

*T. ciliata.* *Willd. Sp. Pl. v. 3.* 544. *Schl. Cat.* 59.

*Tourrete ciliée.* *Reynier Mem. de la Suisse, v. 1.* 171.

WE are happy to add another new plant to the British Flora, through the kind communications of Mr. J. T. Mackay, who gathered it by the sea-side at Rinville, Cunnamara, in the west of Ireland, in the autumn of 1806. This is the *Turritis alpina* of Linnæus, agreeing with his original Gothland specimens, which he once took for a variety of *T. hirsuta*, but described as a new species in his *Syst. Vegetabilium*. The synonym of Reynier (and consequently of Schleicher and Willdenow) is determined by the very specimen sent to the former by Favrod, and now in my hands, together with the entire collections of both these learned Swiss botanists, the legacy of my lamented friend Davall.

The root seems probably biennial. Stem one or more, from 2 to 12 inches high, simple, erect, leafy, round, smooth. Leaves all smooth on both sides, more or less decidedly toothed, fringed with simple or forked, scattered, spreading hairs, a few of which are often clustered into a little tuft or beard at the tips; the radical leaves obovate, often reddish; the others elliptical, half-clasping the stem. The more evidently the leaves are toothed, the less they seem to be fringed. Flowers white, in a simple *corymbus*, very soon becoming a long cluster of linear, narrow, rugged, obscurely quadrangular, shining pods, each crowned with the very short conical style and capitate stigma.

1746



*May 1850, Published by J. & S. Gowerby London.*





[ 1804 ]

**BRASSICA orientalis.***Hare's-ear Cabbage.**TETRADYNAMIA Siliquosa.*

**GEN. CHAR.** *Cal.* erect, partly cohering. *Seeds* globular. *Pod* nearly cylindrical; the partition prominent, awl-shaped. *Glands* 4.

**SPEC. CHAR.** Leaves elliptic-heartshaped, obtuse, clasping the stem; the radical ones obovate and undivided; all smooth and entire. Pods square.

**SYN.** *Brassica orientalis.* *Linn. Sp. Pl.* 931. *Sm. Fl. Brit.* 717. *Huds.* 290. *With.* 589. *Hull.* 147. *Pollich. v. 2.* 247. *Jacq. Austr. t.* 282.

*B. campestris perfoliata*, flore albo. *Dill. in Raii Syn.* 293.

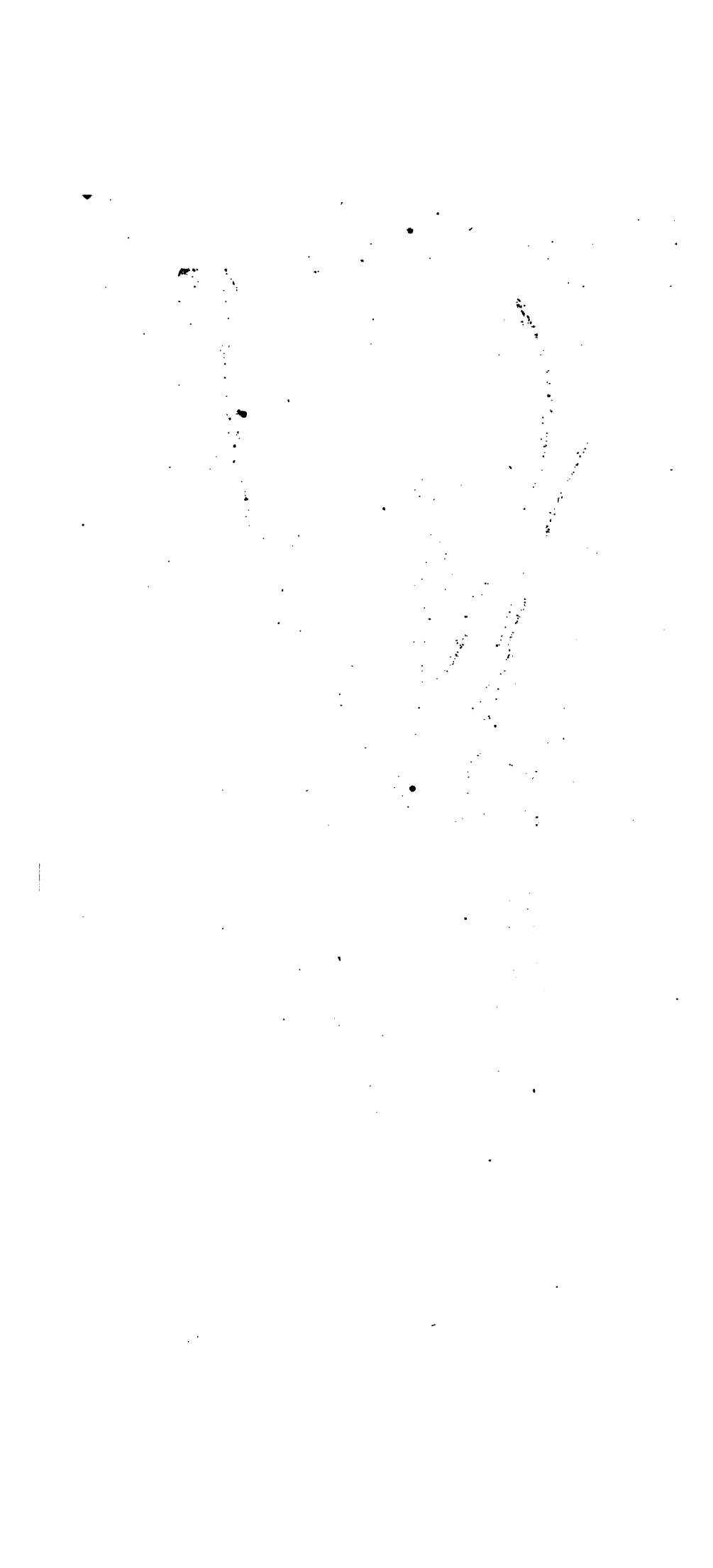
**THIS** is chiefly found in fields near the sea, and on the very cliffs about the coast, especially in Essex and Sussex. Our specimen came from Mr. Hooker's garden, Norwich. It is annual, flowering in June or early in July.

Root small, tapering, white. Stem mostly simple, erect, leafy, round, glaucous, from one to two feet high. Radical leaves obovate, spreading; those on the stem alternate, elliptical, with a heartshaped clasping base; all glaucous, smooth, obtuse and entire. Flowers cream-coloured, in a simple dense corymbus, afterwards lengthened out into a long cluster of very long square pods. Pollich justly remarks that the leaves are all smooth, and Linnæus has confirmed it, though in his *Syst. Veg.*, edited by Murray, the original error, *foliis radicalibus scabris*, is allowed to remain within two lines of the correction. Perhaps this error led Hudson to confound this species with *B. campestris*, for which he erroneously quotes Jacquin's *B. austriaca*. The latter is rather a variety of *orientalis*, having nothing to do with *campestris*.

1804



*Oed. 1807. Fidelella by J. S. Sowerby. London*







[ 2234 ]

## BRASSICA campestris.

*Field Cabbage, or Wild Navew.**TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Cal.* erect, partly cohering. *Seeds* globular. *Pod* nearly cylindrical; the partition prominent, awl-shaped. *Glands* 4.

SPEC. CHAR. Root and stem slender. Leaves heart-shaped, pointed, clasping the stem; lowermost lyrate, toothed, somewhat hispid.

SYN. *Brassica campestris.* *Linn. Sp. Pl.* 931. *Sm. Fl. Brit.* 718. *Scholl. Barb.* 153.

*B. Napus?* *Borrer in Turn. & Dillw. Bot. Guide,* 588. *Mr. Borrer.*

GREAT uncertainty has existed among British authors, even from the time of Ray, concerning this plant. Possibly this is the *Napus sylvestris* of that author, and his *Rapum sylvestre non bulbosum*, mentioned under it, may be our *B. Napus*, *t.* 2146, to which the synonyms of Fuchsius and Bauhin, quoted doubtfully under *campestris* in *Fl. Brit.*, seem rather to belong. Hudson's *B. campestris* is a mere yellow variety of *orientalis*, *t.* 1804, which *Fl. Dan. t.* 550 may also be.

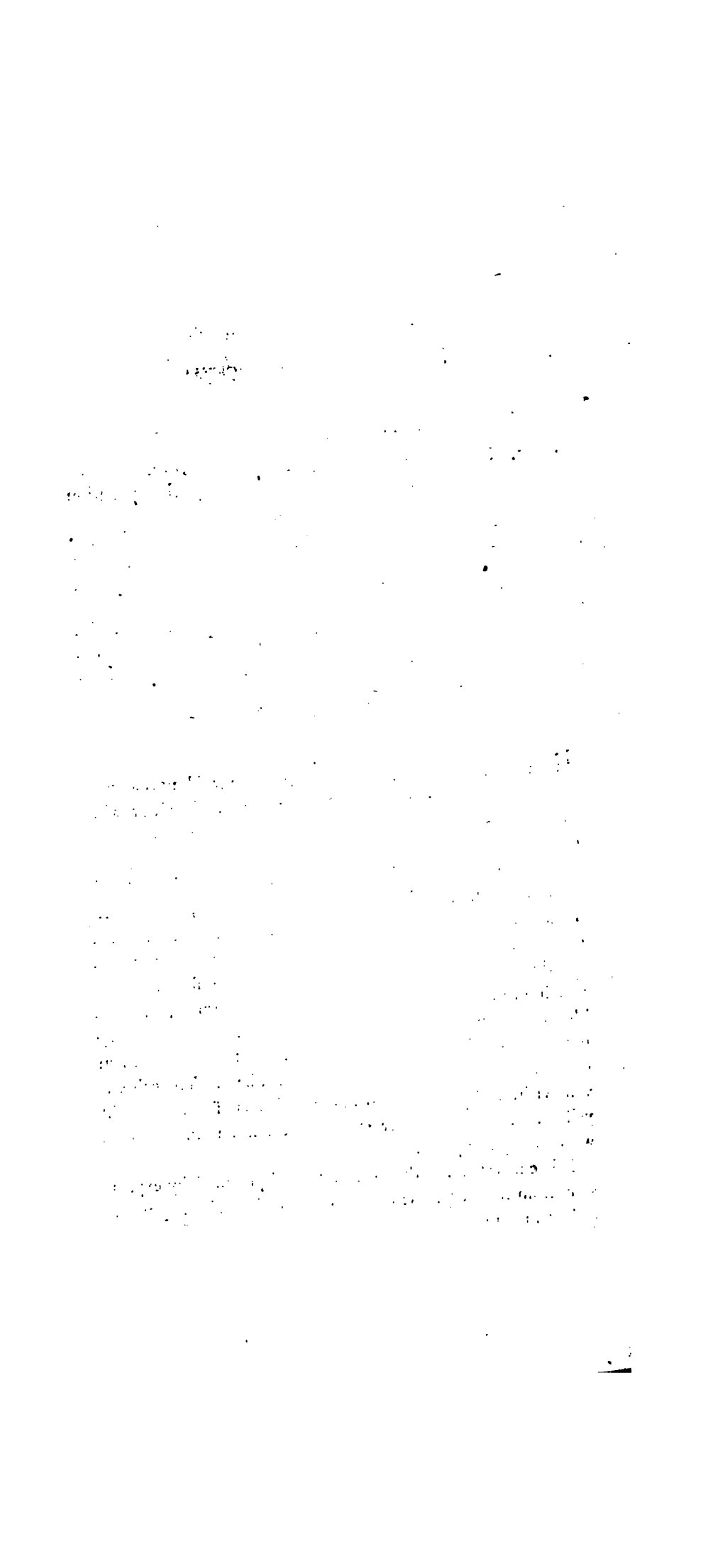
Mr. E. Forster, who favoured us with this specimen in August last, assures us it is the common wild Navew, growing abundantly by the sides of rivers, marsh ditches, &c., and that our *B. Napus* is the Rape- or Cole-seed, which is so commonly cultivated.

Our present plant agrees precisely with the Linnæan specimens. The root is said to be annual, and is of a taper form. Stem erect, branched, round, leafy, rather glaucous, sometimes rough with minute, bulbous, spreading bristles, such as are found abundantly on the lyrate radical leaves, which commonly, but not always, wither before the flowers come to perfection. The stem-leaves are heartshaped, and clasp the stem at their base, elongated, somewhat pinnatifid; the uppermost quite entire. Flowers yellow. Calyx-leaves scarcely cohering, but rather distant. Petals roundish in the limb. Pods upright, cylindrical, or very obscurely quadrangular, veiny, the seeds slightly projecting, the beak awlshaped, striated, square at its base.



*Scissors published by J. G. Smith, London*





## BRASSICA Napus.

*Rape, Navew, or Cole-seed.**TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Cal.* erect, partly cohering. *Seeds* globular. *Pod* nearly cylindrical; the partition prominent, awl-shaped. *Glands* 4.

SPEC. CHAR. Root caulescent, spindle-shaped. Leaves smooth; the upper ones lanceolate, heart-shaped at their base, clasping the stem; lower ones lyrate, toothed.

SYN. *Brassica Napus.* *Linn. Sp. Pl.* 931. *Sm. Fl. Brit.* 719. *Huds.* 290. *With.* 590. *Hull. ed.* 2. 198. *Relh.* 261. *Sibth.* 204. *Abbot.* 145. *Mart. Rust. t.* 103.

*Napus sylvestris.* *Raii Syn.* 295.

RAY seems to have scarcely thought the wild navew indigenous; but it is now at least perfectly naturalized, growing in fields, as well as about banks and waste ground, flowering early in summer.

Root biennial, spindle-shaped, forming a kind of trunk above ground. Stem branched, spreading, leafy, round, striated, smooth. Leaves all smooth, of a light green, rather glaucous, especially underneath: the radical ones are lyrate, mostly disappearing as the plant shoots up to flower; those which grow on the stem are numerous, alternate, broader, blunite and more toothed as they are nearer the bottom, the upper ones being more lanceolate and entire; all of them clasp the stem with their dilated rounded base. The calyx is yellowish, and spreads considerably. Petals of a full bright yellow. Pods on slender stalks, spreading, round, beaded, with an angular point.

It is cultivated for the sake of the oil procured by expression from its seeds, the cake which remains affording an excellent manure.









BRASSICA Rapa,  
*Common Turnip.*

TETRADYNAMIA *Siliquosa.*

GEN. CHAR. *Cal.* erect, partly cohering. *Seeds* globular. *Pod* nearly cylindrical; the partition prominent, awl-shaped. *Glands* 4.

SPEC. CHAR. Root stem-like, orbicular, depressed, fleshy. Radical leaves lyrate, rough; those of the stem nearly entire, smooth.

SYN. *Brassica Rapa.* *Linn. Sp. Pl.* 931. *Sm. Fl. Brit.* 720. *Huds.* 289. *With.* 591. *Hull.* 148. *Relh.* 262. *Sibth.* 203. *Abbot.* 145. *Mart. Rust. t.* 49, 50.

*Rapa sativa rotunda. Raii Syn.* 294.

FREQUENT about the borders of fields; but whether truly wild, or the outcast of cultivation, is not always readily ascertained. It is biennial, and flowers in April. The use of this root as a winter fodder for cattle is sufficiently notorious, especially in Norfolk and Suffolk.

The root is very fleshy and succulent, of a globose figure, more or less elongated or depressed, white, often tinged externally with purple or green, with a taper base throwing out numerous fibres. Culture, in a soil not too rank, renders it sweet, and far less acrid than when wild. The stem is upright, branched, round, leafy and smooth. Radical and lower stem leaves lyrate, jagged, dark green, rough; the upper ones nearly or quite entire, heart-shaped, clasping the stem, smooth, rather glaucous. Flowers bright yellow, numerous, in terminal corymbs. Calyx more spreading than is strictly proper to the genus. Pods cylindrical, veiny, smooth.

Mr. T. A. Knight, so celebrated as a botanical physiologist and cultivator, assures us the Swedish Turnip proves, by the experiment of cross impregnation, rather a variety of this than of *B. oleracea*, *t.* 969, he having never been able to obtain any offspring betwixt any variety of the latter and either the Swedish or English Turnip, but, on the contrary, he has produced every gradation of appearance between the two latter.

2176.



July 1780 published by J. Kew, London.

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## BRASSICA oleracea.

*Sea Cabbage.*

## TETRADYNAMIA Siliquosa.

**GEN. CHAR.** *Cal.* erect, partly cohering. *Seeds* globular. *Pod* nearly cylindrical; the partition prominent, awl-shaped. *Glands* 4.

**SPEC. CHAR.** Root stem-like, cylindrical, fleshy. All the leaves smooth, glaucous, waved and lobed.

**SYN.** *Brassica oleracea.* *Linn. Sp. Pl.* 932.  $\alpha$ . *Huds.* 289. *Wib.* 591. *Hull.* 148. *Freeman Ic.* t. 4, 5.

*B. maritima arborea, seu procerior, ramosa. Raii Syn.* 293.

**T**HE common garden Cabbage in its wild state grows on cliffs by the sea-side at Dover, as well as on the Welch, Cornish, and Yorkshire coasts; but has so seldom been faithfully delineated, that we scarcely know where to refer to a certain figure of it, except in those exquisite elaborate plates published by Strickland Freeman Esq. and said to be the performances of two Ladies, who certainly rank as artists in the first line. Mr. Sowerby drew the present figure at King's Cove, in his late excursion to Devonshire and Cornwall, with Mr. D. Turner, in June last.

Root biennial, raised above the ground in the form of a cylindrical stem, from 6 to 18 inches high, marked with scars from the insertion of the fallen leaf-stalks. Leaves large, various in form, often lyrate, waved and sinuated, all glaucous and smooth; the uppermost oblong, undivided. Flowers in terminal corymbi lengthened out into long spikes, large, lemon-coloured. Pods smooth, with a swelling unequal surface. Seeds large, globular.

The numerous garden varieties of this useful plant are sufficiently well known. The Swedish turnep, as it is called, is esteemed by Linnæus a variety of *B. oleracea*. It is certainly distinct enough in species from *B. Rapa*.



Fig. 1. 2799. *Publ. 1861. 10. P. 100. 10.*

1

1





[ 1748 ]

**SINAPIS arvensis.**

*Wild Mustard, or Charlock.*

*TETRADYNAMIA Siliquosa.*

**GEN. CHAR.** *Cal.* widely spreading. Claws of the petals straight. *Nectariferous glands* 4. Pod more or less cylindrical, the partition longer than the valves.

**SPEC. CHAR.** Pods with many angles, rugged, longer than their own two-edged beak. Leaves ovate, somewhat lyrate.

**SYN.** *Sinapis arvensis.* *Linn. Sp. Pl.* 933. *Sm. Fl. Brit.* 721. *Huds.* 298. *With.* 594. *Hull.* 148. *Relh.* 262. *Sibth.* 208. *Abbot.* 146. *Curt. Lond. fasc.* 5. t. 47.

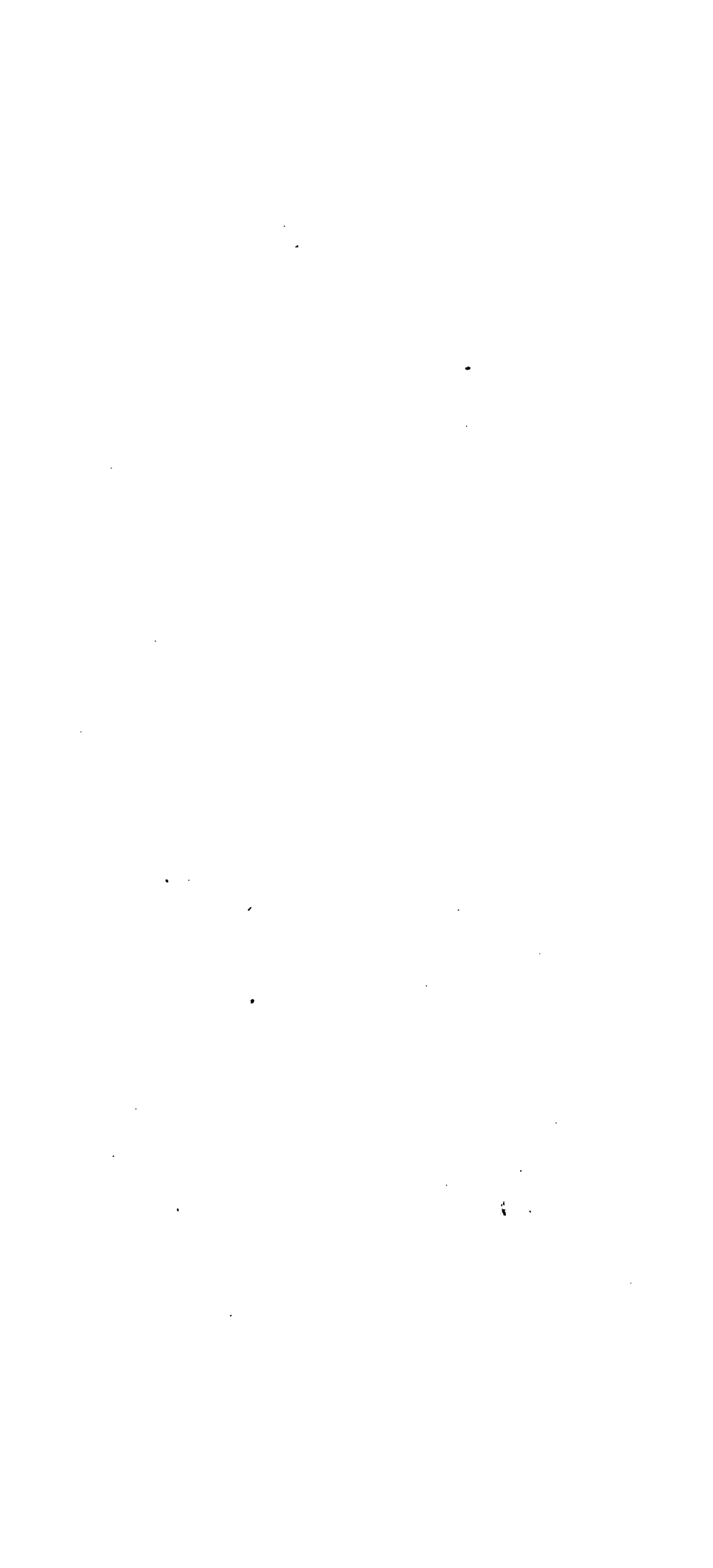
*Rapistrum arvorum.* *Raii Syn.* 295.

**ONE** of the most troublesome of weeds among corn on rather moist land. It is also frequent every where about waste ground and hedges, especially on new banks, the seed being one of those which will lie deep in the ground uninjured for a long course of years, and vegetate whenever it comes within reach of the atmospheric air. It does not so readily grow on a very light dry soil, being more tardy than some other seeds in absorbing moisture sufficient for vegetation. It is annual, flowering in May and June, also occasionally in all open weather.

Root tapering, small, rigid, sometimes a little tuberous. Stem more or less branched, striated, leafy, rough with sharp recurved bristles. Leaves stalked, unequally toothed, rough, ovate, generally somewhat lyrate; the upper ones more simple, sessile, spreading or ascending. Calyx-leaves linear, pale green. Petals bright yellow. Pods upright or a little spreading, with about 8 angles, rugged, mostly rough with deflexed bristles, and each terminating in a sword-shaped, compressed, furrowed beak, not half so long as the pod itself. The seed is used as mustard.







[ 1677 ]

## SINAPIS alba.

*White Mustard.**TETRADYNAMIA Siliquosa.*

GEN. CHAR. *Cal.* widely spreading. Claws of the petals straight. *Nectariferous glands* 4. *Pod* more or less cylindrical, the partition longer than the valves.

SPEC. CHAR. Pods bristly, rugged, shorter than their own two-edged beak. Leaves pinnatifid.

SYN. *Sinapis alba.* *Linn. Sp. Pl.* 933. *Sm. Fl. Brit.* 721. *Huds.* 298. *With.* 594. *Hull.* 148. *Relh.* 263. *Sibth.* 208. *Abbot.* 146. *Curt. Lond. fasc.* 5. *t.* 46. *Mart. Rust. t.* 70.

*Sinapi album, siliquâ hirsutâ, semine albo vel ruffo. Raii Syn.* 295.

RATHER common in fields, waste ground, and by road sides, flowering from June to the end of Autumn, and ripening abundance of seed. In a young state the herb is an ingredient in salads; and the seeds are used for culinary and medicinal purposes as well as those of *S. nigra*, *v.* 14. *t.* 969.

Root annual, small, tapering. Stem branched, spreading, round, leafy, striated, more or less rough with deflexed hairs. Leaves rough, jagged and toothed; the lowest deeply pinnatifid; the uppermost more lyrate. Calyx-leaves linear, green, spreading horizontally. Petals yellow, obovate, entire, with long claws. Glands green. Pods on long spreading stalks, ascending, short, swelling or rugged, ribbed, bristly, containing about 4 large, globose, pale yellowish seeds, and terminating in a flat 2-edged green rough beak, longer than the pod itself, by which this species is well distinguished.

1677



*Descript. & Illustr. by J. C. Sm. & J. C. Sm.*



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**SINAPIS nigra.***Common Mustard.***TETRADYNAMIA** *Siliquosa.*

**GEN. CHAR.** *Cal.* widely spreading. Claws of the *petals* straight. *Nectariferous glands* 4. *Pod* more or less cylindrical, the partition longer than the valves.

**SPEC. CHAR.** Pods smooth, square, close pressed to the stem. Upper leaves linear-lanceolate, entire, smooth.

**SYN.** *Sinapis nigra.* *Linn. Sp. Pl.* 933. *Sm. Fl. Brit.* 722. *Huds.* 297. *With.* 595. *Hull.* 148. *Relb.* 259. *Sibth.* 209. *Abbot.* 146. *Woodv. Med. Bot. t.* 151. *Mart. Rust. t.* 51.

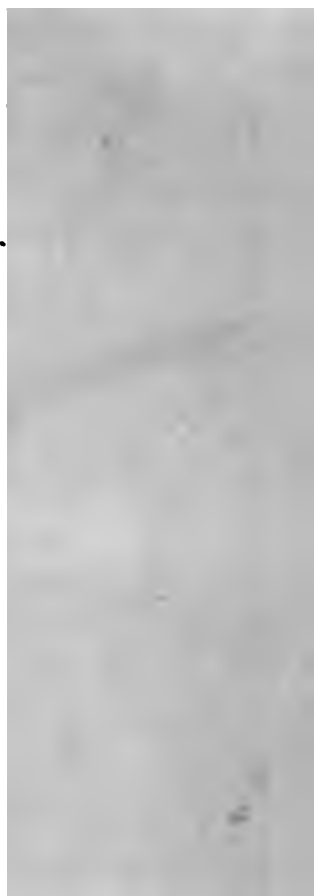
*Sinapi fativum secundum. Raii Syn.* 295.

**T**HE common table Mustard, whose seeds are one of the most useful and wholesome of stimulants, both in cookery and medicine, grows very frequently about the borders of fields, hedge banks, and waste ground, flowering in June and July.

The root is annual, and small. Stem upright, throwing out a number of widely spreading branches, round, smooth, leafy. Lower leaves lyrate, rough, variously lobed and toothed; upper ones lanceolate, spreading or deflexed, entire, quite smooth, standing on short footstalks. Flowers numerous, bright yellow. Calyx a little tinged with yellow. Pods short, erect, and standing close to the main stalk, quadrangular, tipped with the short square permanent style; their surface but little uneven, and generally quite destitute of hairs. Seeds several, round, smooth, brown.



24. 1. 1890. *Androsace* *Androsace* *Androsace*





**RAPHANUS** *Raphanistrum*.  
*Wild Radish, or Jointed Charlock.*

**TETRADYNAMIA** *Siliquosa*.

**GEN. CHAR.** *Cal.* closed. *Nectariferous glands* 4. *Pod* cylindrical, swelling out into knobs, seeming jointed.

**SPEC. CHAR.** Pods jointed, smooth, of one cell.

**SYN.** *Raphanus Raphanistrum*. *Linn. Sp. Pl.* 935.  
*Sm. Fl. Brit.* 723. *Huds.* 289. *With.* 596.  
*Hull.* 146. *Relb.* 252. *Sibth.* 203. *Abbot.* 147.  
*Curt. Lond. fasc.* 4. *t.* 46. *Mart. Fl. Rus.* *t.* 71.  
*Raphanistrum filiquâ articulata glabrâ, majore et minore. Raii Syn.* 296.

**ONE** of the most troublesome weeds in corn-fields, where its pale yellow or whitish flowers are conspicuous in June and July.

Root annual, spindle-shaped. Stem branching, round, glaucous, rough with prominent bristles, leafy. Leaves lyrate, toothed, rough: the uppermost simple, oblong. Flowers larger than in most of our cruciform plants. Calyx slender, bristly upwards. Petals lemon-coloured, streaked with veins which become dark purple as the flower advances in age, and at length very striking, as the lemon ground turns quite white. The pods are erect, tapering, beaked, smooth, knobbed, or seemingly jointed, as they ripen, and longitudinally furrowed when dry. When very young they are divided into 2 longitudinal cells, but the partition is obliterated, and confounded in one spongy mass, as they grow to maturity. Seeds compressed.

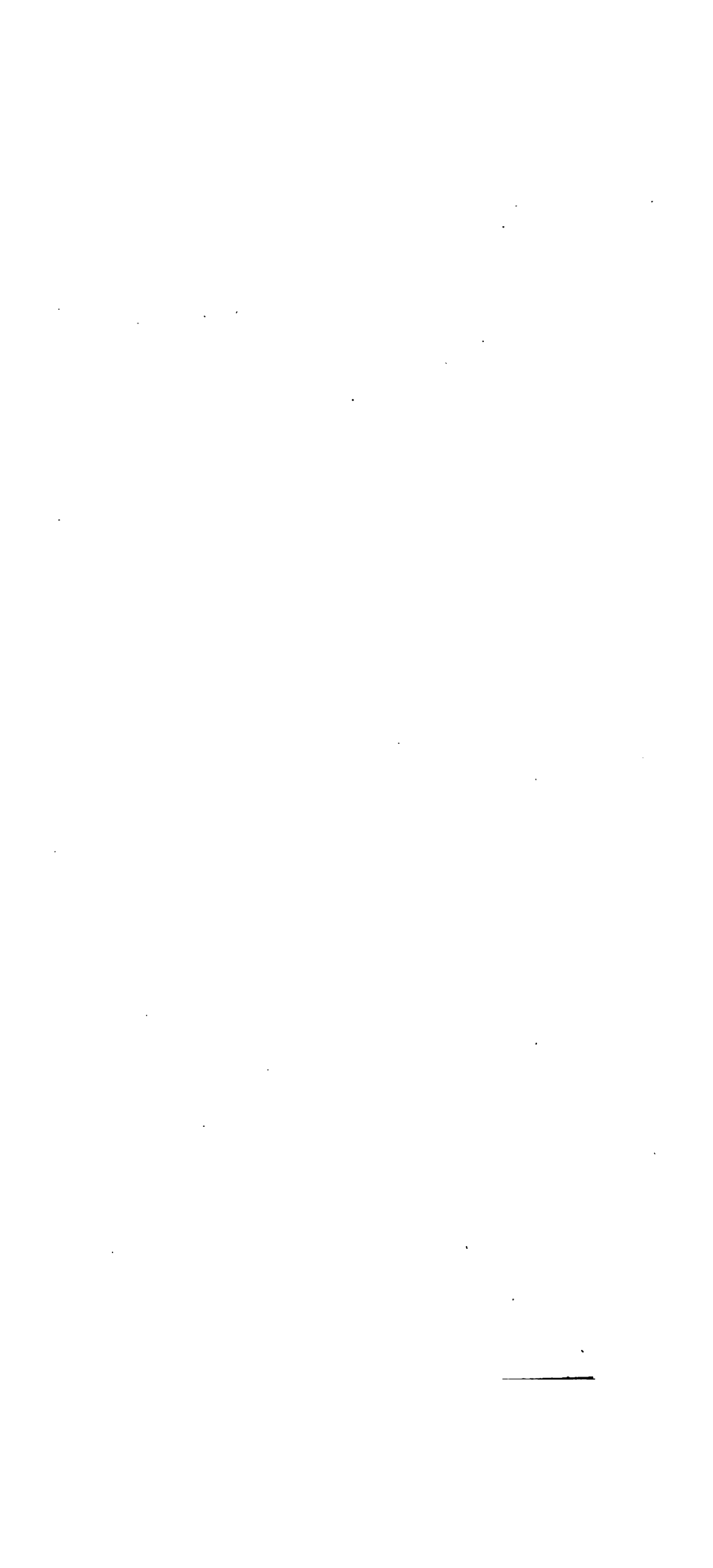
The *Raphanus* n. 3 of *Raii Syn.* (*Fl. Brit.* 7), is a large maritime biennial or perhaps perennial plant, which I had not seen when the 2d vol. of *Fl. Brit.* was printed. Mr. Mackay, who has lately sent it from Scotland, is persuaded of its being a distinct species. This merits further examination.

The idea of Linnæus that the seeds of this plant caused the convulsive disease named by him *Raphania*, see *Am. Acad.* v. 6, is not confirmed by experience.



Made & Published by J. Smith, London.







71.  
[ 1643 ]

RAPHANUS maritimus.

Sea Radish.

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TETRADYNAMIA Siliquosa.

GEN. CHAR. *Cal.* closed. *Nectariferous glands* 4. *Pod* cylindrical, swelling out into knobs, seeming jointed.

SPEC. CHAR. *Pods* jointed, smooth, deeply furrowed. *Radical leaves* interruptedly lyrate.

SYN. *Raphanus Raphanistrum*  $\gamma$ . *Sm. Fl. Brit.* 723.

*R. maritimus* flore luteo, siliquis articulatis, secundum longitudinem eminenter striatis. *Raii Syn.* 296.

*Raphanistrum siliquâ articulatâ striatâ maximâ. Moris. v. 2. 266. Raii Hist. v. 1. 806.*

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SINCE the publication of *Fl. Brit.* I received specimens of this plant from the late Mr. J. Mackay, who observed it on the beach 3 miles from the Mull of Galloway. It was found in that neighbourhood, as well as in the isle of Bute and other places, so long ago as 1753, by my venerable friend the late Rev. Dr. Walker, Professor of Natural History at Edinburgh, who cultivated it till his death as an esculent root, preferable to Horse Radish, and who found cattle to be extremely fond of the herbage. Our fresh specimens were gathered, the end of last May, on rocks near Beachy Head, Sussex, by Mr. Turner and Mr. W. Borrer.

The root is biennial, sometimes, according to Dr. Walker, triennial, large and succulent. Stems 3 or 4 feet high, round, roughest at the base. Radical leaves interruptedly lyrate, which in *R. Raphanistrum*, as far as we have observed, are only simply lyrate: all the leaves rough, and rather sharply toothed. Flowers more yellow than in that species, and less veiny. Pods remarkably and deeply furrowed longitudinally, and strongly jointed, destitute of hairs or roughness.

It always grows near the sea, and is, we have no doubt, a distinct species. The synonym of Petiver's Herball, *t.* 46. *f.* 11, seems doubtful, and is best omitted.





71 P. 10.

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